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The assertion of rights to agro-pastoral land in North Cameroon: a cascade to violence?

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The assertion of rights to agro-pastoral land in North Cameroon: A cascade to violence?

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The assertion of rights to agro-pastoral land in North Cameroon: A cascade to violence?

Ruth Noorduyn

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Ruth Noorduyn Leiden, August 2004

1

Introduction

> *"Tout le monde ayant à manger, la paix peut régner dans les ménages et les familles, le clan ou la tribu"* (Ngongo Mbédé (2003 : 30) "La médiation traditionnelle des conflits par les femmes au Cameroun")

The people of the small village Davagang in the Far North of Cameroon can catch fish all year round due to a deep spot in the Logomatya River situated within the village territory. Unfortunately, people in neighbouring Padmangay have no such wealth and are jealous of the high incomes generated from fish during 'fish-scarce' periods. When demanding access to this spot and negotiating their rights does not bring them the desired opportunities, Padmangay's inhabitants start claiming what has not been given. The dry period of the year does not offer other income generating possibilities, so their demands become increasingly intense. They threaten and even molest Davagang's women and children on their way to market or school. In the end they just start catching 'their' fish. "What is a village boundary, anyway? The river flows…" But Davagang does not accept the interference in its rights, its territory. As Cameroonian villagers, they call in the police for protection. However, Padmangay's men do not seem to be impressed by these representatives of authority. They use guns to safeguard their catch, wound a policeman, hide successfully against reprisals and consider that the use of violence has helped them to the scarce resources. Davagang's people, on the other hand, decide that the police are no use and that they have to defend their property themselves (own observations, Febr. 2000).

Is it indeed, as the women of Cameroon tell us, food shortages that are a threat to peace, is it the limited access possibilities to the natural resource fish, or is there something else that engenders violence along the Logomatya? Whatever it may be, the scarcity of natural resources certainly plays a role[1]. It is this role in violent conflict that is the focus of the research field of Environmental Security (ES). The environment has been both a cause of, and a means

[1] See also Dietz (1996).

in, war since time immemorial, but it has only been since the 1970s onwards that politicians (e.g. Anwar Sadat in 1979[2]) and security scientists recognised the importance of natural resources as a factor in the outbreak of violent conflicts. They reluctantly had to acknowledge that this factor was being chronically overlooked as a cause of conflict. Indeed, if not given specific attention, the environment will not automatically feature in the analyses (Noorduyn and De Groot 1999). Moreover, disregarding one of the myriad 'start-up conditions'[3] of a conflict prevents people "understanding the likely consequences of any cause [because that] may depend on understanding its relation to other causes" (Waltz 1959, in Porto 2002: 17). In such instances, reasons for conflict development may not become clear and an escalation of conflict cannot be prevented.

With a view to exploring the role of the newly discovered ecological factor, a host of publications appeared in the Eighties and Nineties of the last century which described cases in which environmental degradation or the scarcity of natural resources played a role in the outbreak of violence[4]. Nevertheless, to the present day, scholars from the security science field call the "'ecological variable' an underestimated factor [in violent conflicts] among commonly cited [ones]" (Porto 2002: 2)[5]. Nevertheless, the roles of renewable and non-renewable resources in both inter-state wars and intra-state conflicts were examined and a variety of projects focussed on the environment-conflict nexus.

Among the most renown is the Environmental Conflict Project (ENCOP) of Bächler and Spillman in Switzerland[6]. The Swiss researchers focussed on renewable resources and found that 'environmental discrimination' (uneven distribution of resources between richer and poorer or more and less powerful actors) and "bad state performance outside the federal district or national capital areas" (Bächler 1999: xvi) are important factors in the causal chain. Based on the analysis of more than forty case studies worldwide, they concluded that environmental roots of conflict are mostly found in "domestic arenas" (id) and not in interstate wars. They speak of different problem syndromes (like ethno-political or interregional) in which the environment plays different roles. "There are different pathways of present violent conflicts and wars that could be traced to the environmental roots of the conflict genesis" (Bächler 1999: xv). The environment plays a role in violent conflict causation, they say, if and when more than one of five key factors are present. Those factors are: total dependency on the degraded resources, scarcity of regulatory mechanisms and poor state performance, using environmental discrimination to pursue (other) group interests, opportunities for ally-formation (often dependant on strong leaders) and a context of an existing (historic) conflict structure. Whatever the role of natural resource scarcity may be in the conflict, "the threshold of violence depends on socio-political factors and not on the degree of environmental degradation as such" (Bächler 1999: xviii).

Two other important projects in the ES-field, with profound political influence in North

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[2] "Egypt", he said, "would not hesitate to start a war against the up-stream Nile-countries to ascertain the water supply" (Kakönen 1992a: 5).[3] See Sandole (1999).

[4] For an overview see Noorduyn and De Groot (1999: 24) and Halle *et al* (2002).

[5] See also Halle *et al* (2002: i): "A full appreciation of the implications of Environment and Security for development co-operation would require a more complete and systematic attempt to examine these issues in a development country context and from a development country perspective."

[6] See the three-volume ENCOP report of Bächler & Spillmann and Bächler *et al* published in 1996.

America, are those of the Environmental Conflict and Security Project (ECSP) of the Woodrow Wilson Institute in the United States[7] and the Environmental Change and Acute Conflict Project (ECACP) of Toronto University in Canada. The second one was headed by Homer-Dixon who, as long ago as in 1991, published a first article on the relationship of environmental scarcity and violent conflict. Further research on sixteen case studies only confirmed the early findings. In 1999, the total of the theory of the project, as it had been developed over the years, was compiled into one book[8]. Interstate conflicts over non-renewable resources are not very likely, the conclusions stated, but the inescapable effects of scarcity of renewable natural resources is something to worry about. According to Homer-Dixon, such scarcities, springing from depletion of these resources, but also from population growth and an uneven distribution of resources, cause certain societal effects. These are, first, a decrease in agricultural production and economic productivity in general, specifically affecting those who depend directly on natural resources. Secondly, migration and increase of societal segmentation can be expected. Without 'ingenuity' (a certain amount of inventiveness and the combination of inventiveness with drive and the possibility to implement that inventiveness) to counter these effects and mitigate their consequences the effects will cause State breakdown and subsequent violence. This, therefore, shows a clear relationship with environmental scarcity. However, it is claimed to be even stronger because a lack of ingenuity may easily be caused by the scarcity itself.

A last project that has to be mentioned is the initiative of the Oslo-based International Peace Research Institute (PRIO) of Nils Petter Gleditsch[9]. This focuses not only on environmental scarcity per se, but takes circumstantial factors, especially the presence of democracy or other regime types, into consideration. The different characteristics of democracies both prevent the depletion of natural resources and the outbreak of possible violence resulting from such depletion. In accordance with the 'ingenuity' paradigm of Homer-Dixon it is stated that innovation, substitution and price mechanisms can overcome resource scarcity[10].

Although a straightforward link between scarcity and violence has been claimed, the most obvious link in all the case studies seemed to be the one between abundance-in-scarcity and violent conflict. This means that generally the natural resource scarcity itself only appeared to lead to violence when a pocket of abundance of that same resource was present[11]. It is not

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7 This project was headed by Geoffrey Dabelko. See the Environmental Conflict and Security Project Reports from 1995 onwards (ECSP (1995, 1996) or, for example, Dabelko (1997)).

8 See Homer-Dixon (1999).

9 See, for example, Gleditsch (1997).

10 Because PRIO studied the role of natural resources in general the 'resource curse' model is also described and analysed. See Gleditsch (2003) for the three possible types of influence of resource abundance on violent conflict

11 People do not fight for 'nothing'. Nevertheless, pure resource scarcity may be a strong factor in the "rising tensions in social relations […] thus paving the way for evermore overt expressions of disharmony and violence", as André and Platteau (1998) have proved for Rwanda. See also Bigagaza *et al* (2002).

12 See, for example, Collier and Hoeffler (1998), Collier (1999), Porto (2002), De Soysa (2002), Gleditsch (2003), Hoeffler and Reynal-Queral (2003).

13 See e.g. Oketch and Polzer (2002: 88) that it is "false to make a categorical distinction between the economic and political", and that "greed [is not] the only relevant factor in civil war". See also Ballentine and Sherman (2003a: 6): "conceptualising explanations of armed conflict in terms of greed or grievance has imposed unnecessarily limiting dichotomy on what is, in reality, a highly diverse, complex set of incentive and opportunity structures that vary across time and location."

'grievance or greed' as is now often stated[12], but mostly a combination of the two[13], possibly with an emphasis on one of them[14]. Apart from the collection of example cases featuring both violence and environmental scarcity, the aim of the projects was to clarify the causal chain and to discover general patterns.

It is in this tradition that the current research is placed. In contrast to several critics, this study does not reject the ES field as such. Yet, the study is no repetition of the work done so far. On the contrary, this study tries to address the flaws[15] that inevitably face such a relatively new science field as Environmental Security. By that, it tries to improve both conceptual and methodological weaknesses and the analytical profundity.

1.1 Insecurities and conflict

The most important consideration to be made when performing research in the ES-field is that natural resource scarcity is never an isolated phenomenon. It is the complex of insecurities and the interaction of the different types of insecurity, be it social, political, economic or human, that also makes natural resource insecurity important. It is possible to incorporate all the different (in)securities under one big heading, and then say that people's actions are pre-eminently shaped by (the lack of) social security[16]. That concept will then cover "the sum of all regulations and practices within a society which aim to guarantee the individual or group not only physical survival, but also general protection against unforeseen risks which would entail the deterioration of their situation, the consequences of which can not be borne by the individual or group without external assistance" (Schmidt 1991, in Van den Berg 1997: 9). In such a grand category "social security presupposes […] the availability of material resources (land, money, crops, labour)", and "social resources (social relationships, rights, laws, status and power) [that guarantee that] the material resources can be transformed into social security provisions" (Von Benda-Beckmann and Von Benda-Beckmann 1994: 22).

In this concept, all types of scarcities in the different sub-domains of security are part of 'social insecurity', which is the reverse of what is defined by Schmidt (1991). This also applies to environmental scarcity. Because scarcity in one or more of the basic domains is inherent to human life (Mohamed Salih 2003), most people and societies have exercised a broad diversity of responses to it in one or more of these domains, of which violence is but one. One of the more frequently used investments to reach a more secure position is the assertion of rights which makes conflict apparent.

The men from Padmangy certainly did ascertain their rights to the environment, in this case the deep river spot and the abundant fish there. However, they did not choose violence right away. Before they felt a grievance over the unequal distribution of access rights, the conflict had been hidden, latent, in the sense that although they of course realised the potential of

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[14] And always in combination with other factors: "a key issue of contention [between scholars] has been the relative explanatory weight of economic factors vis à vis the role played by other political, cultural, and strategic factors…" (Ballentine and Sherman (2003a: 5)). I will come to that in the next chapter.

[15] I will address most of the shortcomings of current ES studies in chapter 2 (on theoretical notions) and chapter 3 (on methodology).

[16] See e.g. Mazzucato and Niemeijer (2000) who stress the importance of social security arrangements to overcome or prevent environmental degradation.

the deep fish spot, they did not experience it as unjust, because they had their own possibilities in the flooding period, when fish can be found everywhere[17]. Only in the dry season, when Davagang caught fish and Padmangay was denied access, did feelings of dismay start to grow, especially when their general insecurity increased. Soon after that, Padmanagay's inhabitants reacted, in what scholars call 'the phase of requirement' (Griffiths *et al* 1996), by demanding their rights, thereby making the conflict manifest (Chandrasekharan 1997). Only because "..it [was] not possible to withdraw such a demand within the normal relationship between the parties, and the party with the grievance still want[ed] his 'right' …" (Griffiths 1996: 699), did the conflict escalate.

Indeed, the different stages described here show that conflict is a very broad concept, incorporating everything from almost invisible discords of interest or meaning to high-intensity contention with violent expressions. Thus, to prevent conceptual confusion it is important to discriminate between conflict and violence that is only part of conflict[18]. Moreover, confusing the two concepts makes researchers and managers forget that a conflict is sometimes desirable. Without conflict, societies would drift in a state of inertia. "Conflict is the seedbed that nourishes social change", say Rubin *et al* (1994: 7). Van der Merwe (1993: 263) also states that "... social upheaval […] contains the seeds of regeneration and growth". In conflicts the demand for new institutions in a changing world becomes apparent[19]. However, although "[c]onflict in its peaceful forms has engendered much positive change within human society. […], we are concerned about […] the destruction wrought by violent conflict – the lost lives, the maimed and traumatised survivors, the economic devastation and the crippled hopes …" (Rupesinghe 1995: viii). Thus, a society needs a certain degree of conflict, but not too much, and not too intense. "[P]ositive functions of conflict are [often] swamped by the harmful consequences that derive from the use of heavy contentious tactics."(Rubin *et al* 1994: 8-9)[20]. So, it is this switch from positive into escalated conflict that needs our attention.

Following the described notions of insecurities, scarcities and conflict, ES appears to be part of the study of social insecurity and the reactions and investments of actors to counter that. The type and intensity of actors' strategies and tactics differ in relation to the type and stage of their insecurity and, subsequently, the phase of the conflict in which they find themselves. It is an 'ES–in–context' that systematically studies this 'insecurity complex'.

In turn, the actions and the factual (physical and social) results thereof influence which stage of conflict will come next. Safeguarding the resource via a clear assertion of rights by way of purchase (an economic investment) may cause a diversion away from the next, more

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[17] Besides being latent, a conflict can also be potential. In this case at the moment the boundaries were set, but nobody realised that this would lead to unequal fishing possibilities between the two villages, an attentive observer could have seen that it would lead to inequalities and could have denominated the situation as "potentially conflictuous". 'Latent' means: involved persons see the problem but they do not (yet) feel a grievance, nor do they express it.

[18] In ES publications this is regularly forgotten. See, for example, the publications of Homer-Dixon and Bächler themselves and the critic of Peluso and Watts (2001a).

[19] See also Laurent and Mathieu (1994); Chauveau et Mathieu (1996).

[20] Hoeffler and Reynal-Queral (2003: 22): violent conflicts such as civil wars, although perhaps started to improve a country's (or a party's) possibilities, always turn out to be "development in reverse". An economic (and social) revival after a war always has to start at less than zero, and appears to be a very difficult undertaking. It seems as if this has met with success only after WW II in Europe and only then with substantial outside help to overcome the ruins of war.

escalated, conflict stage. As Rupesinghe (1995a: 51) said about the 'requirement phase': "if addressed at this stage the conflict may not escalate". But what does 'addressed' mean? At different phases, different actions can be chosen, both by the direct actors and by the managing institutions, that all aim to improve the present insecurity. Each action can be the start of the continuation of, or the diversion away from, the conflict. However, security for one may mean insecurity for another.

In addition, it has to be stressed that conflicts need not show a linear pattern in the development of the different phases. ES in its context of different, mutually influencing insecurities has to be aware of the possibility of back and forward jumping or spiralling conflicts. For example, installing "negative peace" (that is, not addressing the structural causes of conflict (Sandole 1993a: 280-281)) out of necessity in a very acute and violent phase can mean that the conflict will develop anew. The phases can then show a circular pattern. Moreover, in seasonally occurring conflicts, temporary solutions can cause the discord to flare up each year, with the risk of a more escalated temporary end-situation each time: a spiral to violence. Of course, the stage of grievance, the very low-level insecurity situation (perhaps even only existent in the mind of the actor), occurs very often, but the human race, being a social race (Clark 1993), has learned (or got it in his genes)[21] to handle these grievances peacefully most of the time. The social security arrangements of most societies include management and prevention institutions to resolve conflicts, from whichever domain they may spring, in an early phase.

Besides actions, causes can also differ per stage. There is, or can be, a difference between the factors that cause the conflict to develop in an early phase and the factors that cause people to resort to violence at a later phase. Different insecurities may be perceived differently when the conflict phase has changed. ".. Escalation of a conflict does not simply involve greater size or intensity, but may add a new dimension" (Van der Merwe 1993: 269). Starting from differences in objectives (Van de Goor *et al* 1996:1), "in opinions regarding values, interests, aims, or relations .." (Miall in Van de Goor *et al* 1996: 1) between "at least two individuals or groups" (Van de Goor *et al* 1996: 1), conflicts arrive, when these differences are incompatible; when, out of those differences, "actors are pursuing incompatible goals" (Rupesinghe 1995: 73). It is, of course, not the difference as such that causes conflict. Nor is it each difference that leads to incompatibility. The use of a natural resource in two different ways that exclude each other can obviously lead to competeting interests and give rise to initial conflict phases. Whether or not the escalation into violence of this conflict is also due to the resource scarcity remains to be studied. At that moment a careful ES approach will again have to involve the other possible insecurities and scarcities. Simply stating a one-dimensional cascade from environmental scarcity to violence, as Homer-Dixon (1999) did, risks overlooking inherent complexities and causational turns.

1.2 Land as a natural resource

The natural resource land can be expected to show more of the complexities that need to be clarified in the ES studies than any other natural resource would show. Of course land is first

[21] De Waal (1998: 236) states that, "... it is possible that conflicts between human beings are inevitable and that aggression has such a long evolutionary history, that you may expect excellent control-mechanisms".

and foremost the basis for agricultural and pastoral production and a place to live. Land is indispensable for very basic life needs. Although, in Latin America, the dependence of the poor on land is decreasing (Zoomers 2001) and the question that has to be posed in relation to that continent is whether land and natural resources are important for livelihoods (Appendini 2001: 27), in rural Africa "land and the biological resources the land supports are principal livelihood assets" (Toulmin and Quan 2000a: 4[22]). There, it is an "insurance against uncertain employment [or] a pension fund for old age" (Platteau 1996: 50). Additionally, land, as a production factor and especially when commoditised, can become a source of wealth. On the other hand, "land […] is a stake and a resource within social and political competitions" (Le Meur 2002: 135). People use land to "gain control over others" (Juul 2002: 204) and over other resources (such as water wells). Apart from all-pervasive natural resources such as air, other natural resources are positioned in land. Although perhaps not officially, ownership and managerial rights to land also give *de-facto* rights (possibilities) to determine access to other resources that can only be reached via the piece of land in question. Land forms the basis for power[23] and power forms the basis for land. For example, chiefs have rights of sovereignty that are connected with "political control over their territory and over their subjects" (Fisiy 1995: 6).

A third characteristic of land is its function as a bearer of meaning which is different for different pieces of land and for different cultures. Land has a role as a source for social identity. The alienation of land means cultures risk losing their roots. Indeed, "[the value of land] is embedded in the social structure and history of a particular community […] and it has a significant symbolic component" (Platteau 1996: 50); the alienation of land is more than the loss of livelihood security. It easily violates "deep-seated social norms [upon which] bitter resentments and acute tensions are aroused which may lead to opportunistic acts and, in the worst cases, even erupt into open violence" (id: 56). Local individuals and groups may react strongly when scarcity rises and when they risk the alienation of land to outsiders. Thus, it may be expected that, if the phenomena being looked for in this research really do exist, they will show up explicitly when studying land.

In addition, because of the combination of the three properties, "power, wealth and meaning" (Shipton and Goheen 1992) but especially that related to power, higher level institutions quickly interfere in land issues. Indeed, the State's sovereignty is ascribed to its territory, to its land, more than to its trees or rivers or wells. Even when State policy covers the other types of natural resources, it is connected to their being placed in the land.

Land therefore seems the most appropriate choice for a focus of attention when considering that a study into the causal pattern of environmental scarcity to violence needs comparable cases and, at the same time, when considering that comparison is only possible when the amount of variables is not too overwhelming. Indeed, this last can be achieved by restricting the amount of natural resources studied. Conflicts over water or fish, as in the Logomatya case, can only be part of this 'land-choice' when the connected discords are approached as conflicts over territory.

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[22] See also Quan (2000: 32).

[23] For example Platteau (1996: 52) stated that "… to a significant extent, demand for land arises from non-economic motives such as social prestige and political power."

1.3 Summary

In short, violence (frequency and seriousness) over scarce natural resources has become an issue for social as well as political scientists and practitioners. Testing the presence of the assumed relationship and understanding the causal relationship between the two variables is necessary to broaden the scientific understanding of society. Focussing on the natural resource land, clarity is sought on whether or not this understanding can aid (or prevent) the formulation of specific policy measures. Why do people under more or less the same circumstances choose for different strategies when confronted with growing insecurity? Why do the farmers that are busy clearing parts of the grazing area of Kila in North Cameroon raise their sticks against a cattle-owner that shows me the boundaries of the same pasture and yell that they would rather "kill you and your white lackey-woman" than give up their fields here? When, how and why do people invest in the assertion of their rights to land, particularly when the situation seems to be on the brink of violence? When and why do they choose violence to ascertain their rights to land? What is the direct and what the underlying cause of the extreme anger and the subsequent willingness of the younger men of Dzambou (North Cameroon) to organise armed protest against the prohibition of access and use of fields in a nearby pasture area?

This research studies three different cases of conflict over land at the local level in the Extreme North of Cameroon from 2001 to 2004, using different sociological, geographical and anthropological methods.

After this Introduction, chapter two will investigate some theoretical notions related to the Environmental Security field. Both the concept of Environment as well as the concept of Security will be dealt with to shed clarity on how these two terms are looked at in this study. Subsequently, I will outline the reason and necessity to come up with a kind of model to structure research in the Environmental Scarcity and Security field. Then, I will construct such a model and in the process I will discuss the concepts and 'sub-models' to be used. Thus, at the end of chapter 2, the flow-diagram "Violence-or-Escape" (VoE), which is to be used as a guiding model in the rest of the study, will have acquired form.

Methodology and methods used in the study are the subject of the third chapter. The focus is on the choice of theoretical background, the research sites, the way to perform the studies in the chosen villages and some problems encountered during the fieldwork .

In the fourth chapter, the general geographical background of the study will be described. First, some very brief information on Cameroon as a country is given. Then, I will focus on the Far North Province, where the three case studies were performed.

The next three chapters (5 – 7) are dedicated to the full description and partial analysis of the three cases, thereby following the VoE-model and using the concepts described in the theoretical chapter. By doing so, two purposes can be met. First, because of the strict use of protocols implemented in the diagram, the cases can be easily compared. Second, the usefulness of the model to guide Environmental Scarcity and Security research can be tested.

Chapter eight actually deals with these two goals. Again following the VoE diagram, the three cases are analysed and compared, so generalisations about the causal pathway from Environmental Scarcity to Violence can be formulated. This is followed by a presentation and examination of old and new criticism of the original Environmental Security notions. The document ends with a short section dedicated to the usefulness of the model itself.

2

The causal cascade: dwindling resources, violence and escapes

2.1 Aim of this chapter

As stated in the Introduction, the nexus of natural resources that play a role in violent conflict causation or as conflict object (when abundance-in-scarcity is at stake) is the subject of this thesis. For the purpose of the research, three different areas which seem to foster some grievances, but which have not developed full-scale violent conflicts (yet) have been studied. The aim was to make a comparison between the three full causal stories of conflicts. This chapter intends to come up with a framework to systematise the research field of 'environmental security'[1] (ES) and thereby clarify the discussion between academics (and politicians) who see or do not see a link between environmental scarcity and violence.

Within the 'environmental security' field as well, different scholars of the same and different disciplines have seriously conflicting opinions and not only use different concepts and definitions, different assumptions and different theories, but also study different scale levels. These different approaches must be integrated in order to reach a more fruitful debate and open up the possibility of reaching a more productive outcome. This integration takes place in the framework.

After a short discussion of the usefulness of the ES field, despite all the critics, I will explain the necessity of the proposed framework. Only then will I start to build up that framework.

[1] For an explanation of this research field see the Introduction.

2.2 Objections to ES science

2.2.1 To the whole science field

Since the start of the research projects into a causal relation between environmental scarcity and violence, several scholars have reacted with scepticism. Some of them have even totally rejected Environmental Security as a science field. In general the critics have recognised three categories of flaws in ES that basically all come down to an excessively restricted view of the science field.

To the astonishment of many scholars, the ES field uses specific and fairly narrow definitions of the terms 'Environment' and 'Security'. In fact, it is this limitation that spurs most of the criticisms. Why is 'environment' only seen as the natural resources that support the (economic) subsistence of people (or states)? What about nature in its own (intrinsic) right? And why are other resources, such as air, not incorporated? Violating the health of humans and nature[2] by environmental pollution in favour of economic gains, especially threatens the security of the poor[3].

On the other hand, limiting the concept of security to 'physical attacks against humans or material property' unsettled social scientists. After the broadening of the term 'security' in the Eighties and Nineties - from the denotation of 'safeguarding national values against external threats by military or allied means' (Levy 1995) to 'safeguarding also local and global values, among which economic and ecological ones and human rights, against threats in general by not only military means'[4] - one would expect the subject of a new science field, which emerged in the same period and using this term in its name, to have the same scope.

Critics expect ES to study the connection between 'human' or 'social' (in)security and environmental degradation. Thus, ES should focus on securing a sane and supporting environment so as to safeguard the human lives and livelihoods that depend on it. However, doing so would mean that ES does the same as has already been done by Environmentalists or Sustainability researchers and politicians.

The irritation felt concerning the contradiction between the 'all-involving' name and the narrowness of the factual research subject as defined in its terms made opponents criticise 1) the origin of the science field, 2) the starting-point and end of the chosen 'causal story'[5] and 3) the blindness for several important connections within that 'causal story'. Together, critics say, these three weaknesses will lead to neo-Malthusian pessimism. This "fear for the poor" (Peluso and Watts 2001a: 11) will in turn cause the development of repressive policies to 'save the world from violent reactions to scarcities', thereby "not leav[ing] any room for local negotiations, adaptations and innovations", and "den[ying] any role for agency in the non-violent resolution of local conflicts of interest" (Hussein *et al* 1999: 414).

However, the critics' worries concerning "violence by states against their own people"

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2 See for example Rajan (2001).

3 The excessively narrow definition of 'violence' therefore excludes this 'violence of pollution'. Peluso and Watts (2001a: 23): "… it implies a narrow interpretation of violence (for example it excludes the violence of cancer alley in Louisiana)…" (*a lane with an exceptionally high percentage of cancer, most probably due to pollution, RN*).

4 See for instance Noorduyn and De Groot (1999: 26-27), Halle *et al* (2002), Gleick (1993) or Opschoor (1996).

5 This is a term used by Noorduyn and De Groot (1999:36): see below for an explanation.

(Peluso and Watts 2001a: 30) and their apprehension of the narrowness of the notion of security, have engendered (or are perhaps based on) groundless accusations of instigation and the adoption of the subject by the military to safeguard their position after the end of the Cold War. In addition, this fear of the critics themselves caused them to regard ES as being founded on "the emergence of "new" forms of violence […] such as Islamic terrorism or ethnic cleansing" (Peluso and Watts 2001a:11). By doing so they overlook the fact that, as they themselves (id: 10) rightfully state, ES had already started to play a role in the 1970s, when both geopolitical conditions did not seem so apparent or did not even exist. In addition, the second accusation contradicts the first: do the military need the environment as a funding issue, when "the war on terrorism" already furnishes them with endless funds? On the contrary, it was a politically inspired recognition of the lack of awareness of one of the causes of violence and the fear of too many military actions as a possible result that inspired pre-ES scientists to draw attention to the subject.

As the diverse projects mentioned in the introduction have shown, a connection between violence and environmental scarcity does exist. Thus, focussing on this connection and leaving out broader ones, is a legitimate choice of scholars. As Noorduyn and De Groot (1999: 36) have explained, both "scientific and daily-life stories display relatively arbitrary cut-off points in spite of the fact that in the real world causal chains neither have a true beginning nor an end". A good scientist cannot cover the whole of reality. The demand of the critics to start not at the point that environmental scarcity exists, but to include the (political economic) causes of environmental scarcity as well, is equally arbitrary. Because many scientific disciplines focus on that subject, I consider the choice of the starting point of ES as a logical limitation. The same applies to the choice not to extend the ES research beyond the point of violence. Of course mediation and peace-building are important factors and phenomena, both for scholars and for politicians, but they need not *per se* to be included in ES, as an after-violence device.

Yet, not giving specific attention to phenomena that are present before the beginning or after the end of the chosen causal chain, that exist alongside the causal chain or that are the reverse of the causal chain, does not mean that ES denies their existence. Naming 'structural scarcity'[6] or 'environmental discrimination'[7] as key sources for environmental scarcity is an explicit reference to the political economic causes of this scarcity and, thus, fore-lying causal chains. In my opinion, it is also an implicit way to call for the halting of this kind of discrimination. Nevertheless, other academic (sub)fields have to cover (or already cover) this and the rest of the wide range of connections in detail. The results of all these different endeavours may be integrated later on, if necessary. Indeed, to show the positioning of ES in a wider context, several ES publications[8] start to describe which sorts of linkages between environment and violence they will not take into further consideration.

An obvious link in addition to that of 'scarcity leads to violence' is the reverse one: violence and war can cause scarcity and degradation of natural resources. Violence or wars destroy

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[6] Homer-Dixon (1991, 1994, 1999).

[7] Bächler *et al* (1996), Bächler (1999).

[8] See Gleditsch (1998), IUCN (1998) or Noorduyn and De Groot (1999) for an overview.

water wells, agricultural lands, or forests, whether deliberately[9] or as collateral damage[10]. In situations of violent threats, refugees tend to flight to marginal or as yet uninhabited areas, such as nature parks. The pressure thus augmented can degrade the already fragile lands or disturb the natural equilibrium[11]. An example of the over-use of certain areas as a result of the flight from dangerous areas, prone to violence, is the southward movement of cattle nomads in Chad due to the civil violence (De Bruijn and Van Dijk 2003). But, being part of the sustainable development paradigm, the relationship between incoming refugees and the subsequent degradation of the environment has already been addressed outside the ES boundaries by environmental and (some) economic scientists. However, ES focuses on the effects of the resulting scarcity of natural resources (such as water or land) on the peace process or a new eruption of violence.

Yet, it is not only *scarcity* of resources that plays a role in violent conflicts. The opposite is also true. Since the end of the 1990s, scholars have claimed that the abundance of minerals, oil and even valuable crops such as (e.g.) coca-plants, is a far more important objective to fight for. Statistical analyses have demonstrated a far greater risk for civil war of resource abundance than of resource scarcity[12]. In general, distinguishing between mineral resources and renewable resources is important. "'The honey pot' of abundant mineral resources is a major determinant of civil conflict" (de Soysa 2002: 28), but for renewables "conflict is likelier when countries have a moderate level […] per capita but [it] diminishes with abundance" (De Soysa 2002: 17). However, some of these authors used primary commodity exports as a measure of resource availability, although this might as well be considered as a measure for resource dependence and scarcity. It does not say anything about potential resource availability and whether or not these exports are on the brink of disappearing because of resource supply depletion. Even those researchers who considered the real stock of natural resources[13] based their calculations on data at country level and did not look at regional (or lower level) differences in natural resource endowments, let alone boundary-surpassing inequalities[14]. The civil wars in both Sierra Leone and the Democratic Republic of Congo are not restricted to within these countries' boundaries.

As has already been mentioned in the introduction, absolute scarcity is no reason to fight. It is a reason to go away. It explains the link between moderate levels of renewable resource availability and violence. This can be seen, for example, in the study of Witsenburg and Adano (2003 and, Adano and Witsenburg 2004) in the Marsabit district of Kenya where, in drought years, water wells are not the object of conflicts because the majority of cattle-keepers move to the south in search of pastures. In addition, the remaining people are too poor and do not want to take excessive risks to safeguard their water access. Violence, "like any other form of organized social activity, requires financial and other resources …" (Ballentine and Sherman (2003a: 1). When the possible gain is too low, a cost-benefit calculation of the use of violence

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9 An often mentioned example is the use of Agent Orange in the Vietnam War, but the biblical acts of polluting the enemies drinking water sources also serve as examples.

10 For example, bombing Serbia in 1999 destroyed the sewage system of Belgrade and caused the spill-over of waste water into the Danube.

11 See for example Dudley *et al* (2002).

12 See e.g. Auty (2001), Collier (2000), Collier and Hoeffler (2002), De Soysa (2002).

13 E.g. De Soysa (2002).

14 See for example Cater (2003).

that includes the risks will turn out negative. Thus, the resource that will be fought for has to have (monetary) value. The abundant (but 'free') resource 'air', for example, has never been fought for. The value derives from the fact that the resource is precious on the (global) market and thus generally scarce and, secondly, that it can be looted. This means that it is locally abundant and provides an "easily [to be] captured stream of revenue" (De Soysa 2002: 8). These three conditions can be met more easily by non-renewable resources. The last two factors explain the positive relationship between civil war and the primary commodity export-factor.

Although ES does not deny the strong relationship between resource abundance and violent conflicts, it does question the specific role of the abundance. After all, statistical analysis does not reflect the direction of the cause-effect chain. Nor does it distinguish between abundance as a start-up factor or as a continuation factor[15]. "The larger the conflict, the more likely it is that it has evolved through many stages and the more likely it is that the factors that sustain it are different from those that provide the initial trigger" (Ballentine and Sherman 2003a: 8). In reality the underlying cause of an ongoing conflict may well be a (relative) scarcity of resources, started at a very local level. Indeed, Cater (2003: 19) warns that several wars in Africa have a high "complexity and intractability" and that related (UN) "policy making [is] influenced by potentially misleading assumptions […] particularly excessive reliance on a paradigm of economic predation." A "modified 'political economy' approach may more accurately reflect the realities of contemporary armed conflicts", Cater says (2003: 19-20). This is exactly what 'improved ES' (see below) will do.

Another link, described by Peluso and Watts (2001a) as an important but forgotten one in the nexus between environment and conflict, is the amelioration or restoration of the environment. However, contrary to what these critics state, this phenomenon falls directly in the ES body of research. It is nothing else than the struggle between two user groups over a certain scarce resource (mostly land) based on differences in interest and form of use. The establishment of a nature park or reserve to conserve an endangered species or to safeguard the potential environmental support systems pits the State[16] against local herders or farmers who suffer from scarcity of land and have no alternative regions in which to perform their subsistence activities[17]. Although some ES scholars look too narrowly at the State's role[18], the phenomenon of the State as one of the contending parties in a conflict is incorporated in the body to be studied by ES.

Because ES confines itself to direct violence, all sorts of structural violence that indirectly engenders overwhelming poverty and bodily harm are not clearly incorporated. Structural violence against human beings because of the extraction of natural resources by rich end users without any account being taken of the well-being of the local inhabitants[19], for example, or

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[15] See Sandole (1999) about differences between start-up and continuation causes. See also Guàqueta's (2003) description of how armed groups in the Colombian conflict transformed into "formidable money-making machines" (id: 93), tapping resource wealth during the conflict which was started on the basis of grievances concerning the low economic performance and unequal distribution of benefits.

[16] Secondary actors in State policies to install nature parks are often international NGOs (e.g. IUCN).

[17] See for example Bauer (2003), Balmford *et al* (2001), Loth (2004), Lewis (1996), Shyamsundar (1996).

[18] The notion of the State as one of the parties in an environmental conflict escaped, for example, Homer-Dixon (e.g. 1999) who describes the State only at the end of his overall schema as a victim of escalating social effects of environmental scarcity.

[19] For example the worldwide unequal distribution that engenders poverty and subsequent high morbidity and mortality rates.

structural violence caused by budget division in favour of the violence and defence industry, are connections between the two concepts that are not directly covered. However, by studying the causal pattern from environmental scarcity to violence and by examining all the factors that influence actors' steps and possibilities, ES cannot avoid involving these political economic subjects[20]. That this should be done more systematically, while "preventing too simplistic conclusions", as Hartman (2001) now observes, is something I will come to in the next section.

In short, the critics who repudiate the whole ES science field do so because they think that the boundaries thereof are set too narrow. They do not disclaim the existence of a link between environmental scarcity and violent conflict. Yet, they judge the exercises of ES as being too limited to generate unambiguous results. Their last category of criticisms contains all the aspects which lie within the causal story studied by ES but which have not been studied. As Dietz (1996: 23) already said: "interpersonal strive and competition can be turned to productive co-operation, and collective solutions to difficulties can be found, even in desperate resource situations." Claiming an unambiguous relationship between scarcity and violence via the ruin of management institutions, without any eye for the constant re-definition of such institutions and for other routes that may be chosen by actors, indeed risks leading to 'dangerous' top-down policies.

Like the critics, I think it is necessary, both for a general scientific understanding and as an aid for policy measures, to improve the knowledge about the discussed link. The connections between environmental scarcity and violence deserve special attention to help explain when and why violent outcomes have to be feared. Therefore, partly in order to overcome "simplistic linkages between 'increased environmental scarcity', 'decreased economic activity' and 'migration' that purportedly 'weaken states' and 'cause 'conflicts and violence' (Peluso and Watts 2001a: 5), my study tries to improve the concepts, methods and therefore results of research in the ES field.

2.2.2 Countering flaws within the science field

Although most of the weaknesses of ES mentioned so far are going to be described and responded to in following sections, I will briefly enumerate some of them here.

Up to now too much emphasis has been given to the supra-local, even national or supranational level in the search for causal links between environmental scarcity and violence[21]. Systems, not actors and agents, have been the focus of attention. To clarify people's strategies, the local and (small) regional levels as well as empirical studies in these local and regional settings should be focused on.

In addition, a greater insight into the relationship between scarcity of natural resources and violence will be gained if circumstances of environmental scarcity **without** violence are studied[22]. As yet, attention has almost exclusively been paid to cases that show, at first sight, both violent conflicts and environmental scarcity. However, in most cases of environmental prob-

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[20] As has already been stated with regard to Bächler's "environmental discrimination" (Bächler 1999), and Homer-Dixon's (1999) "structural scarcity".

[21] The level of the State is also used to measure the importance of resource scarcity versus resource abundance in civil war causation. Regional differences between regions within States, that is the abundance-in-scarcity paradigm, are ignored.

[22] This point is also made by some critics of the whole ES science, for example Levy (1995).

lems people do not react with violence. Equally interesting to study for clarifying causal patterns between scarcity and violence are the situations in which clear-cut violence does not (at first glimpse) coincide with environmental problems. Violence as such is the result of "very complex interactions, and seldom mono-causal" (Van de Goor *et al* 1996:1).

However, the absence of violence may also be part of a complex situation in which both violence and non-violence are chosen as a strategy to overcome the insecurity raised from the environment. What Homer-Dixon (1999) traverses with two steps (from environmental scarcity to social effects to violence) in local realities appears to comprise a myriad of different strategies and tactics which are different for different actors at different moments in time and which are influenced by insecurities in other domains than the environmental one.

Such highly complex situations have to be studied with the help of the insights into and theories of all different science fields that already cover (parts of) the phenomena involved.

2.3 Complexity and models

2.3.1 Multy-disciplinarity

Human-Environment Interaction

To study such situations that can be classified as (potential) resource scarcity conflict situations, different theories and concepts from disciplines and sub-disciplines are used that study the interaction between individual human beings as well as their groups and societies with their surrounding environment (being local, regional or even global) and the problematic aspects thereof. In accordance with the New Ecology ideas that characteristics of ecosystems are no self-preserving properties but only by-products of individual plant and animal strategies (Cahen 1988), ecological branches of several social sciences[23] as well as the Dutch Environmental Science[24] regard human beings as agents in an environment built by the natural surroundings, the socio-cultural and the legal-political fabric, as well as the economic reality[25]. "The variability of natural resources over time and people's varying and often flexible responses to

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[23] Such as Human Ecology (eg. Levine 1975), Cultural Ecology (e.g. MacC Netting 1977), Ecological Anthropology (e.g. McCay and Vayda 1993 or Milton 1996) and Political Environmental Geography (e.g. Dietz 1996).

[24] Dutch Environmental Science developed in the Netherlands in the early 1970s as a discipline that combined the insights of both social and natural sciences and formed an interdisciplinary body of knowledge to study the interrelationships between humans and their environment, with emphasis on potential and actual problems within this relation, with the aim to find ways to solve these problems (e.g. Udo de Haes (1991); Bouwer and Copius Peereboom (1993)).

[25] At the beginning of the 19th century ecological principles, such as Darwin's theory of 'survival of the fittest', that triggered the idea of competition as the driving force behind all actions of living organisms, inspired several scientific (and non-scientific) domains. From then on, ecological branches of several social science disciplines sprouted (and evolved) from this stem, wherein human beings are finally thought of as not being independent from their (natural) environment. As man was seen as a biological species, interrelations of human beings were studied analogue with plant and animal interrelations. To this end the social sciences used methods and theories from the biological sciences, with the inevitable result of (from time to time) "unsophisticated adoption of biological concepts" and "bad analogies" (Young 1983: 96). Very soon the social and the moral order of human society were seen to be missing in the analysis. Headland (1986: 61) wondered "how [...] culture articulates human populations with their environment" and Steward (1955 in Young 1983: 63) wanted to "understand [...] the effect of environment upon culture." (continued on next page)

it" (Dietz 1996: 34) make this environment a highly dynamic one.

To this should be added the influence of people's images of the surrounding reality on their actions. "Man's behaviour is structured by a set of habits, norms and values which reflects the perceptions or rationalisations of the surrounding world in the particular society or social group to which he belongs." (Platteau 1996: 55). "While there is an objective reality, our perceptions of that reality are mediated by social processes. Biophysical reality shapes social perceptions about itself through individuals reflexively changing or accepting their perceptions contingent to their direct or indirect experiences with reality" (Burke 2001: 467). Dialectically, the behaviour, that is the actions, of people which result from worldviews and direct perceptions, influences the shaping of that physical reality.

Yet, the perceptions (although influenced by former generations' stories) cannot be but short-time based. They do not account for the fact that "the causal relationships within environmental systems are sometimes best represented by sharply non-linear mathematical functions" (Homer-Dixon 1999: 37); that "[i]ndeed, some environmental systems are chaotic" (id.: 38). For everyday human life, the knowledge of ecologists that "to describe complex, interdependent systems of organisms [...] metaphors of anarchy, flux, and constant turmoil are […] apt" (Homer-Dixon 1999: 39) are not workable.

Thus, in order to tackle this mixture of influences that shape people's roles and positions in and with their environment, several theories about mutual human-environment determination, more specifically those that regard the use of land and the expansion of the use thereof, are (sometimes implicitly) integrated into the framework and will therefore be discussed shortly. Meanwhile, the (perhaps simplifying) perceptions of actors (between other things, the interpretation of the state of their natural resources) are considered to be decisive in the shaping of their strategies and actions.

Human-Human Interactions

In a study that tries to explain the reasons of the outbreak of violence between people or the absence thereof, theories and concepts from the fields of social sciences and humanities have to be incorporated that describe or explain human interactions as such. Not only the problematic relationships of people with their environment, but also the problems that arise there from in the strictly social domain (or vice versa) is the subject of the study. Within Sociology (as

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Although the 'ecological social scientists' themselves have formulated critiques on their over-reaction to see all human beings and action as wholly 'natural' and (thus) their unrestricted adoption of ecological notions, such critiques can be extended still, especially since ecologists have developed totally new insights into ecosystems and aggregate communities therein instead of (only) competition as a driving force. Although the use of concepts, like 'niche' or 'predation', may sometimes be very useful, it has to be stressed that the focus of the different ecological social sciences on "individual as well as population responses to environmental forces and stresses" (Orlove 1980: 251) is too narrowly restricted to a one way relationship between people and their environment. In addition, phrases like "the mechanisms by which the system is sustained and maintains its equilibrium" (Van Driel 2001: 26) indicates a systems approach – with its box-like concepts - , that is too confined in situations where there are no boundaries, and certainly not those drawn on a very limited scale, whether in time or in space. Last but not least: contemporary ecological insights deny the existence of total balanced ecosystems. Especially the Sahel and Sahel-Sudan zone are currently seen as non-equilibrium environments. These three issues are already stressed by Leach, Mearnes and Scoones (1999: 232): "We need to ask, for instance, which social actors see what components of variable and dynamic ecologies as resources at different times? […] How does natural resource use by different social actors transform different components of the environment?"

'Conflict studies'), Anthropology, and Political Science ('Peace studies'), to name but a few, sub-disciplines focus specifically on discords between people. There are many theories about the development of revolutions[26] that offer ideas and concepts, of a socio-cultural and structural-political kind, which are helpful for an analysis of growing discontent and rising tendencies to violence. In addition, although revolution against authorities as such is not the focus of this study, during the course of the study the overthrow of governments or (particularly) other authorities may, nonetheless, appear to be a factor.

More important are the theories and case studies dealing with conflict and conflict resolution on an inter-personal or inter-group level[27]. Of these, the theories on individual behaviour and goal seeking (e.g. rational choice theory), which are based on social identity (whether or not ethnicity driven), relative deprivation and frustration, psychologically formed stereotypes and world views (whether or not based on cultural patterns), and group conflict patterns and resource mobilisation methods occupy a prominent place in the description of conflict theories.

2.3.2 Why a model

Basing a study on such an overwhelming number of different theories and disciplines could lead to the main issues becoming lost in a plethora of complexities. We need to "find a language that makes interdisciplinary discourse possible" (Brox 1990: 227). Therefore, as has been stated, I will develop an integrating framework based on the perception that a concise theory, that incorporates all these different notions, is necessary in order to acquire a view of reality. However, it has to be emphasised that it can only be "a kind of 'window' on reality" (Brox 1990: 229), "that provides us with a particular view of the phenomena we are trying to understand" (Kenneth Pike in Headland 1986: 65). Broadly speaking, there are two types of theories. First, 'simple', 'straightforward' models to explain certain phenomena (such as Rational Choice Theory or the Geographical Location Theory of Von Thünen (see below)), and, second, 'encompassing' models to order the world.

The first are used to discern the "A" from the "non-A" in a certain situation, i.e. not to prove the 'realness' or truth of A, but to test the relevance of the "A - non-A" divide. For example, the Rational Choice Theory says that people act according to rational cost-benefit considerations. Of course the non-A, that is behaviour that is *not* based in rational calculations, does exist. However, it can be useful to initiate a search for an explanation of people's actions in the rational domain. This is especially so when the limitations, such as the existence of non-A, are recognised. Here the warning of Ostrom (1990: 183-184) springs to mind that several criticised models are not so much wrong, but only applicable under special circumstances, namely "[w]hen conditions in the world approximated the conditions assumed in the models…" She also states that "these are special models that utilise extreme assumptions rather than general theories."

The second type of model tries to describe a whole complex of phenomena, all mutually related as well as related to other complexes. In short, it describes a non-limited system of the real world. At the same time, though, such a "description is necessarily a selection out of the real world" (Segers 1977: 57). It is always possible to use another cut-out of the world, anoth-

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[26] De Toqueville (1835), Marx (1887), Gurr (1993), Huntington (1996), Mohamed Salih (1999).

[27] For example those of Burton (1993), Rubin *et al* (1994) or Sandole and Van der Merwe (1993).

[28] See, e.g., Van den Hombergh (2004).

er angle from which to view reality. For each such window or 'frame'[28] one should keep in mind the things that are neglected by this view. According to Headland (1986), Pike has already argued that the same phenomena can be viewed through two or more different windows (or theories), showing different aspects of a pattern. It is in this tradition of description of an entire, complex part of reality that I will build my model to enable a better understanding of the relationship between resource scarcity and violence or non-violence at local level: the model as "a paradigmatic structure that helps to order the material" (Rapaport 1985)[29]. The proposed model will be descriptive in the sense that it seeks to give "all" possible reactions and influences that drive an actor's conducts in the pathway to violence (or, for that matter, the avoidance of violence). And because, "'[a] theory must be simpler than reality if it is to be helpful,

> *[i]t attempts to strip away from attention those items which are not important to the observer at the moment. In this way it helps obtain answers to particular questions on a narrow front by simplifying the task of investigation … A scientific theory is good only if it leaves out wisely those materials which are relevant to other questions but not to those immediately being answered'" (Pike 1982: 5-6 in Headland 1986: 65).*

Thus, for my model, the word "all" must be interpreted with some reservation: only the important "all" will be included and these will be categorised in order to reach the aimed simplicity. The other restriction is that the model describes only a selection of the world by limiting its scope to the local or regional level and by not surpassing the moment of violence outbreak.

In such an 'encompassing' model the simpler "A – non-A" models, the actor level and actor-in-interaction-models, can be used to analyse the different ordering steps. Assuming that violent encounters can occur between two individuals or between clusters of individuals or even very big groups, the framework proposed here starts at the individual level and works with the individual actor models as they exist in the social sciences (e.g. De Groot 1992). Personal livelihood strategies formed by 'rational' use, overuse and shifts of and between the divers capitals, as described by Bebbington (1999)[30], will be the focus of my attention. Within the flow-diagram I try to discern the different steps that actors can make based on their livelihood decisions, the influences that lead to a specific step and the consequences of different steps, following especially the chain that may lead to violence. Other scholars have to focus in more detail on the peaceful pathways of co-existence that, together with the competitive ones, always form a complex mixture of livelihood strategies in the real world. In compliance with Bebbington, who emphasises the importance of access to different "capital assets", I wish to point out the fact that 'whole' frameworks "must capture both the dynamics of conflict […], and those of cooperation ..." (Bebbington 1999: 2023). However, it has to be stressed that every researcher always chooses 'his own part of the total story of reality' (Noorduyn and De Groot 1999: 36). Of course a cascade that describes only the path up to violence does not imply total ruin without recovery, as some critics suggest Homer-Dixon (1999) said by ending his

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[29] Thus, here the frame focuses on scarcity of natural resources in the story-line towards violence. Another possible frame may be the role of ethnicity or religion in the story-line towards violence. Nevertheless, as will be explained further in the sections about the influencing factors, the chosen frame does not mean that these other phenomena do not play a role in my model.

[30] Produced (being separated by Henkemans (2001), and DFID (Appendini 2001: 26) into physical and financial), social, natural, human and cultural capital (see the next sections about escapes and influencing factors).

model after the breakdown of states and governments[31]. 'No condition is permanent' (Berry 1993) as has been noticed already by the pioneers of sociology (Simmel 1955, Coser 1967) and their followers (Parsons 1994, Boulding 1993). Moreover, sometimes conflict and even violence seems to be necessary to alter a status quo that hinders development[32]. Then the breakdown forms the dawn of a better situation.

Like the 'encompassing' model of Homer-Dixon (1991, 1994, 1999)[33] by which it is inspired, my window on reality only deals with the Cascade from scarcity to violence, albeit with all its in and outgoing influences and possibilities, and the flows (called 'escapes') to non-cascade-following actions. Structurally including (co)-causes and 'escapes' helps to counter the missing views from the Homer-Dixon model.

Next to that, there is one aspect of the Homer-Dixon model that, according to me, makes the analysis somewhat rough. Yet, it cannot be enhanced by simply adding to that model. As "a good analytical model makes you see one aspect of a complex problem in great clarity, [and] you always risk that it makes other important details of the same phenomenon disappear from your view" (Brox 1990: 232), I have chosen to change the perspective of my model a bit from the systems-level to the perspective of the individual actor. Mostly, in my research, this is a human person, but it can be a group. Yet, because local communities are diverse and divided entities, perspectives of individuals within the group are always of importance. Von Benda Beckman *et al* (1992: 3) already stated that "there is no such thing as the community as a whole". People have different positions dependent on different situations. For example, men and women as well as adults and children have different roles, capacities and stakes. "There are differences in access to resources, in power, in technical skills between ethnic groups, between age groups and between individuals" (Van Est and Noorduyn 2000: 54-55). Within the hearthhold family, the extended family, the village or towards the outside world (e.g. as a member of a political party or an employee of a certain enterprise) persons have different bearings in different groups. A group only serves as such under specific circumstances. Under other circumstances or from another perspective the group boundaries have to be demarcated differently[34].

The value of a 'window' or 'frame' is that it can help to look at certain situations. My model will help, while following one causal chain backwards, to explain an already existing violent conflict or, by going forward, to predict probabilities of certain strategies, one of them violence.

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31 Van Houweling (2000: pers. comment), Witsenburg and Adano (2003).

32 Laurent and Mathieu 1994; Van der Merwe 1993 (263): "Such social upheaval also contains the seeds of regeneration and growth". Gluckman (1982) even describes the positive social ordering principles of conflicts within and between family (ies).

33 Homer-Dixon 1999: 134, figure 1: Starting from three types of rising scarcity he unfolds a flow chart of causal steps leading to three types of violence. One of his main points is that only ingenuity (page 109: "by ingenuity I mean ideas applied to solve practical, technical and social problems") can give an escape, but, although "necessity will often be the mother of invention", "[i]n some societies […] resource scarcity simultaneously increases the requirement for ingenuity and impedes its supply, producing an *ingenuity gap*." (id: 108), see also Homer-Dixon (2002).

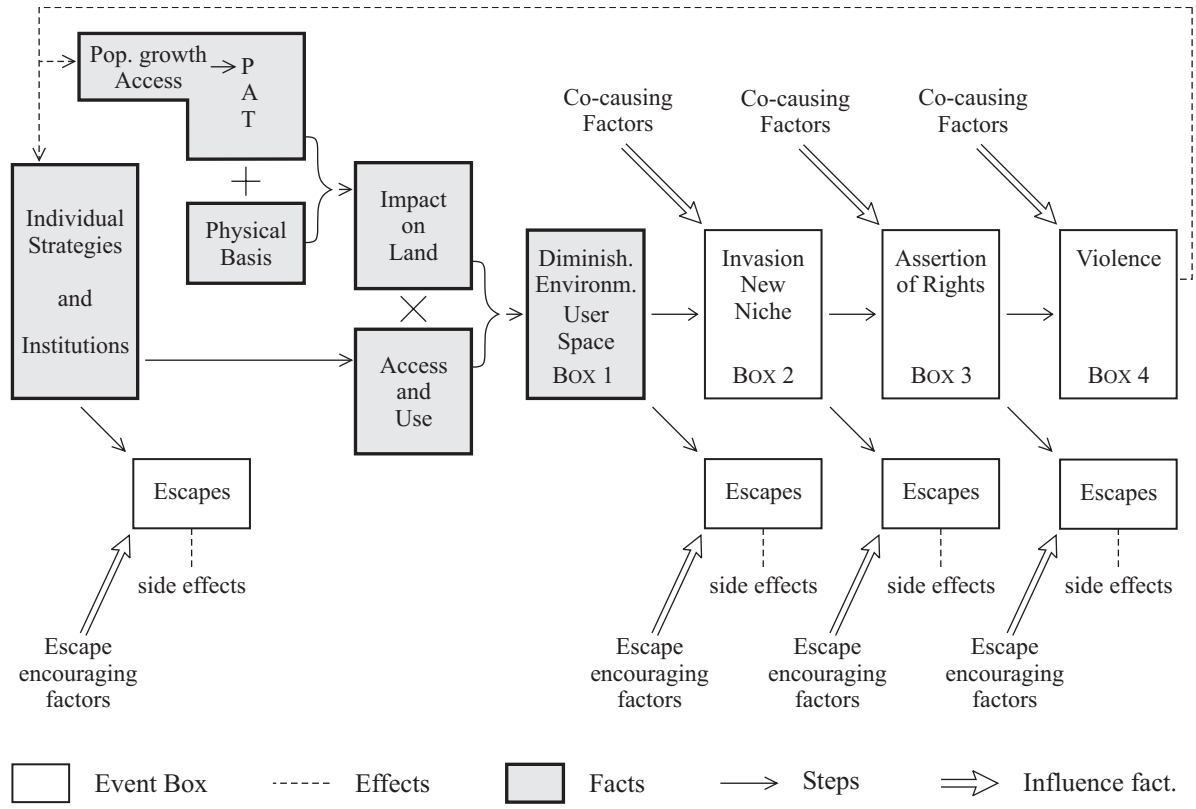
34 See also Hanna *et al* (1996) or Crehan (1997).

2.4 Building the model of this thesis

2.4.1 General remarks

The framework may be seen as a conspectus of possible reactions that people can show when confronted with the series of events, that are formed by the positive and negative influences and circumstances from outside or from within their own 'life', or by the 'flow' itself. As mentioned above: "organisms and environment are dialectically related" (Barry 1999: 188). To this I add that this applies to the dynamic part of their relationship as well: series of actions both influence and are influenced by themselves, their users and the surroundings. This interdependent mixture of (changing) facts, events and reactions of actors to these three parameters is schematised in Figure 2.1: forming the Cascade from environmental scarcity to Violence connected with the flows to Escape the seemingly inevitable cascade.

Figure 2.1 Violence or Escape diagram



The following applies to the legend of the figure:

The grey boxes on the left-hand side of the framework represent (changing) facts, which are real or at least perceived by the actor. The three white boxes on the right are 'events' caused by reactions of actors. The white boxes in the second row are 'non-cascade' events. Straight arrows are 'steps', reactions of the actor. Double-lined arrows depict the influence of two types of factors on the reaction of the actor, on events and facts or on both. Dotted lines and arrows reflect results of actions not necessarily directly brought about by the actor; sometimes leading to (new) facts and events, sometimes to other people's actions, mostly in a feedback loop.

2.4.2 The model at large

Start: left-hand side

Despite criticism claiming that Homer-Dixon is a pessimist neo-Malthusian because he warns against something they do not see[35], I do not reject Malthusian theory all together. As is emphasised within the (Dutch) Environmental Science Theory, attention should be focussed on the intersection of Boserup ("the growth of population is a major determinant of technological change in agriculture." (Boserup 1965: 56)), and Malthus ("the power of population is indefinitely greater than the power in the earth to produce subsistence for man."; "Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio" (Malthus 1798: Ch I: 4)) and the circumstances that influence the evolution of either of these paths[36].

Thus, following on from the ideas of Malthus (1798)[37] and Hardin (1968)[38] that our world is finite, and of neo-Malthusians[39] that human beings are perfectly able to minimise the resource base by unsustainable use[40], I start the causal flow on the left-hand side of the diagram

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[35] See Introduction.

[36] See De Groot (1999: 2-6), and Homer-Dixon (1999: 43).

[37] Malthus (1798) has argued that the exponential growth rate of human population could not and would not be followed by the same rise in food production. According to Boserup, Malthus states that "… food production [i]s a limiting factor for population growth" (Boserup 1965: 12*)* In the end: humankind will be faced by "misery and vice" (Malthus 1798: 5), by famine, "starvation and death" (Malthus 1803, in Mazzucato and Niemeijer (2000: 307)), if not by war over these scarcities as well. For Malthus the core idea was that scarcity and poverty are the consequence of the combination of a stable resource availability coupled with a rising resource demand. More labour does not increase extraction from the resource base such, that an increased demand will be met.

[38] The common property theory has a biology and economics foundation. It stated that in a situation of "unlimited harvesting of common and freely accessible resources", while these resources as such are limited (Hardin 1968: 1244), in the end "[harvesting] becomes, and stays, unprofitable for all participants" (Brox 1990: 227). This basically Malthusian view has already been voiced by Gordon in 1954 (p.131): "There appears, then, to be some truth in the conservative dictum that everybody's property is nobody's property. Wealth that is free for all is valued by no one, because whoever is foolhardy enough to wait for its proper time of use will only find that it has been taken by another …". Hardin has called this the "tragedy of the commons", meaning that (Bryant and Bailey 1997: 161) "individual action leads inexorably to social and environmental ruin in the absence of a state to protect collective interests." The only other possible option, adherents of Hardin's theory claim, is to change the commonness of the resource to something private to produce a situation wherein "both costs and benefits of resource use accrue to individuals who rightfully control the access of others" (Burke 2001: 453). In 1990, Ostrom first challenged the wisdom of Hardin's 'tragedy of the commons' and explained that the described phenomenon only pertains to 'open access'. Since then, Common Property Theory has evolved from having a focus on state-dictated or private property management systems of resources, via the Evolutionary Theory of Land Tenure, in which communal land tenure rights are claimed to change automatically over time into effective and efficient yield enhancing systems (see, e.g. Platteau 1996), to more nuanced and place and circumstances-dependent ideas of 'ideal' management forms of natural resources (see, e.g., Berkes (1996)).

[39] With some minor changes, present-day followers of the Malthusian way of thinking still "emphasise physical causes of scarcity and poverty: population size and growth, the resource-consumption rate per capita and the quantities of natural resources available to a society" (Homer-Dixon 1999: 43). Recently researchers have added a yet stronger reason why production would not keep pace with rising consumption, by suggesting that a larger population might decrease the resource base through environmental degradation because of their greater demand. In that case the scarcity is self-perpetuating.

[40] This does not mean that I see this and the poverty that arises from it as an inevitable path ("a law of nature"), with which humanity has to live. Similarly to Ross (1998) I assume that the Malthus path is avoidable when a sufficient and the right effort is made.

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(see Figure 2.1), assuming a negative impact of humans on their environment[41]. Of course such an impact can also be brought about by 'natural' factors, like climatic extremes[42]. The reaction to these natural set-backs can be the same as to human-induced degradation. As Homer-Dixon pointed out, it is not only environmental degradation that leads to diminishing possibilities for people to use natural resources. Environmental scarcities are also brought about by excessive demand for these resources (by Homer-Dixon (1999: 48) called 'demand induced scarcity'). In addition, some people experience scarcities because they cannot use what they need because others have taken too much (in Homer-Dixon's terminology: 'structural scarcity').

The problem with Homer-Dixon's three causes of environmental scarcity is that they do not represent the same conceptual level. I will go even further in the distinction than the fundamental critics, who only separate structural scarcity from the other two. It is not true that demand and supply are of the same order and "refer to the changing size of the pie driven by population size and consumption", as Peluso and Watts (2001a: 18) remark. In principle, a higher demand does not cause a generally smaller pie. It only results in smaller pieces per consumer. Simple economic laws then predict an increase in production. In the case of natural resource output, this may be reached by an increase in technology. However, natural resources do not strictly (and always) follow normally applicable economic laws. Excessively high demand (and thus a scarcity experienced by the consumer), that otherwise would have been answered by an increase of the supply, may, in the case of natural resources, totally ruin the supply because of the resulting degradation and exhaustion.

Paradoxically, the disastrous effects on the resources of excessive demand by all may be countered by an increase in unequal distribution. Then, scarcity for some will increase. This brings us to the third of Homer-Dixon's scarcity-inducing factors. Indeed, structural scarcity is not a real scarcity, but a distribution problem that may also exist when the pie is 'big enough' (and as such requires different actor strategies). Indeed, Fairhead (2001) warns that Homer-Dixon's 'structural scarcity' is nothing other than the well-known inequalities tackled in political economic approaches. Re-naming it as environmental scarcity, he says, exposes the risk that it will be de-politicised, "[isolated] from international political economy" (id: 215), and with this "[obscuring] more than it reveals in analyzing causes of war" (id: 214).

Bearing in mind the conceptual differences between the three 'sources of scarcity' (Homer-Dixon 1999: 47) and thus the necessity of careful disentangling of underlying causes, I agree with Homer-Dixon that it is the dearth of natural resources (or of a specific natural resource) for certain actors that may cause conflict[43] and that the causes of environmental scarcity are not only degradation. Besides, very often the causes of environmental degradation as such lie in the political economic realm. Structural scarcity itself can cause real scarcity in the sense that it can lead to environmental degradation of marginal areas. The research field of Political Ecology has recognised this link[44]. Thus, focussing on the environment in conflict studies does not mean de-politicising it. It purely means drawing attention to a field of causes that would be otherwise overlooked (see introduction). For all these reasons the left-hand side of my

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41 Like Bächler (1999), although he considers degradation as a given fact.

42 Whether or not detected climate changes are human induced remains a topic of discussion which I will not go into here.

43 A phenomenon that demands more knowledge and insight.

44 For an extensive overview of Political Ecology: see Bryant and Bailey (1997).

model is a little bit different from that of Homer-Dixon, although I too focus on environmental scarcity in a broader sense than only degradation.

The quality and quantity of the effect on the environment is determined by several factors, all incorporated within the flow-scheme on the far left-hand side. I will deal with them when discussing the different parts of the schedule. Here I only wish to mention that these factors, contrary to the assumption voiced in Homer-Dixon's model, do not only cause or aggravate a negative impact. There are also positive factors, such as the positive influence of humans and their institutions, as described in the Boserupian and Ostromian[45] theories about human capacities, which prevent and counteract the negative impacts on the environment and the diminishing of the resources. In consequence, both Malthus' and Boserup' pathways are possible and are thus incorporated in the VoE diagram.

One of the agencies that influence the direction of the pathway is the State (or the lower level State-representing bodies). In contrast to what Homer-Dixon suggests in his schema (Homer-Dixon 1999: 134), States and other institutions are not only vulnerable entities that suffer from negative impacts of scarcities and the ways people react to that, and then give way in reaction to violence. Positively or negatively they co-shape the factors that cause the impact on the environment, or they determine the impact directly, for example by fixing the actual use of someone's 'environmental use space (EUS)'[46], via rules and the implementation (or not) thereof (De Groot and Persoon 1999: 158). Moreover, State institutions also shape and influence the ways conflicts are handled. Perhaps even, they may cause the outbreak of conflict, out of neglect – as Boulding (1993: 197) put it: "… wisdom and skill complex [of identity groups] may undergo distortion and even degeneration in interaction with an indifferent or hostile state" – or out of faulty and wrongly judged interference. For example, land registration by States with the aim to diminish disputes have, as Platteau (1996) demonstrates, only "opened up new possibilities of conflict and insecurity" (id: 48) "for less influential rights-holders" (id: 40). Next to that, States can lose their legitimacy by strange and not-trustworthy actions, thereby causing (escalation of) conflict[47]. However, conversely, they may help to overcome discords about resources between actors by a dependable legal system and courts (Mc Kean 1996: 240).

In short, in my model institutions figure more on all the influencing sides[48] than only as victims on the far right-hand side of the diagram. It should be noted that violence at local level does not always have anything to do with State breakdown, or rarely does so. It may, however, be related to the breakdown or the general loss of legitimacy of local governing bodies.

Continuation: Middle part

The diagram begins on the left-hand side with the elements that build up the Impact on the environment and the factors that influence these elements. Moving to the right, each box depicts an event. Following the Cascade to Violence each 'event box' leads to a new event, ending in the event 'violence'. On the way, each box is (or can be) influenced by certain co-causing aspects. Next to that, the unwinding of the cascade can be stopped (that is: given

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[45] Ostrom (1990) describes the conditions that make sustainable use of common resources possible.

[46] A term, first introduced by Opschoor and Van der Ploeg (1990) as being that part of the natural environment that human beings can occupy without causing damage to the essential elements thereof, and thus leaving the same 'amount' of natural environment for future generations to use.

[47] See Warfield (1993: 182-183).

[48] Also further on the right-hand side of the VoE diagram which I will refer to later.

24

another direction) by 'escapes' at each step, which form equally important routes within the model. Each escape has its consequences and can be enhanced or frustrated by certain facts. Of course certain types of escapes can have the form of a negative feedback on earlier effects and events.

End: the right-hand side box
As explained earlier, the narrative of this research starts with environmental scarcity and ends with the outbreak of violence. However, this is not an absolute end, because violence itself is no one-dimensional, one-time event. It has the same complex position (and build-up) as all other factors of the diagram. Thus, when the violence influences the Violence-or-Escape diagram (= VoE diagram) again, in a kind of feedback loop, 'that which comes after' is incorporated into the study (see Figure 2.1).

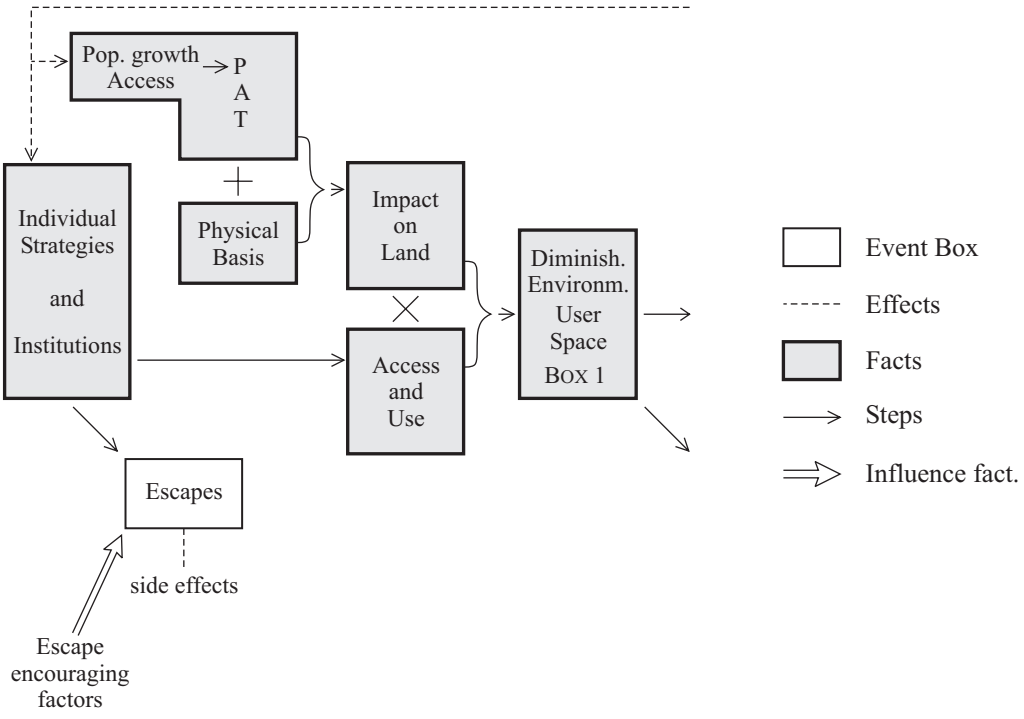
Hereafter, I first discuss the central steps in the framework from left to right: the Cascade to Violence. I then focus on escapes and influencing factors for each step. By categorising these factors and escapes I will try to generalise on peoples' strategies, although, of course, these are always totally context-dependent.

2.4.3 The details of the three parts of the VoE diagram

The Cascade to Violence

Box 1
As already stated, a negative impact on the environment is the basis for starting to construct a stream-diagram of actors' steps in the direction of violence (see Figure 2.2).

Figure 2.2 Violence or Escape diagram, left-hand side (Box 1).



In the Environmental Sciences for this Impact the symbol **I** has been used, meaning the impact of human beings on the environment in terms of some basic normative values. This impact is the same as the product of three interconnected factors (**I = PAT**) and depends on the physical basis of the environment. For actors in direct need of natural resources, the impact on the environment combines with the actual possibility of individuals to use, control and access the environment (and which environment) to determine the amount of scarcity they encounter.

In the Environmental Science equation **I = P A T**, the different factors stand for:

P = Population (number of persons)
A = Affluence (turnover of goods per person, i.e. type and extent of 'implemented' demands per person)
T = type and extent of Technology with a (negative) impact, i.e. impact per unit of goods (e.g. technology that diminishes pollution is 'positive' technology, if it does not cause roll-offs and externalities)

The fact that **I** is the same as the product of these three factors means that whenever one or more of the factors rise, the Impact rises. **I** can stay the same or even diminish when one or more of the factors diminish or the combination of increase and decrease of the different factors generates a lower product. For example, the number of persons increases, with each of them using the same number of goods, but the technological way of production has improved and the negative impact per good has diminished in such a way that the total impact declines. In Malthusian reasoning, even when affluence stays the same, rising population numbers are far greater than any technological improvement of agricultural production. On the other hand, the Boserup line of thinking states that, even in the case of rising affluence, the increase in the number of persons causes such a technological improvement that all negative impacts are countered[49]. Access possibilities are implicitly incorporated in the **P**. If people are prohibited from using a certain piece of land (for example) in a densely populated and increasingly populated area, and if said piece of land is indeed not used, the **P** for that specific piece of land returns to zero.

Physical basis

An important determining factor for **I** is the 'physical basis' of the environment. The effect of **PAT** is different under different physical circumstances. It refers to the ultimate resilience of a certain environment. This is related to long term vulnerability to changes, as well as to desired use, which as such refers to difficult concepts such as carrying capacity[50]. In the Netherlands, with its large-scale bio-industrial way of livestock keeping and the related fodder imports and fertiliser use, the physical basis of the soils with regard to mineral content is

[49] Boserup (1965).

[50] Bartels *et al* (1993) provided an excellent overview of the history, different meanings, confusion and (non) usefulness of the concept 'carrying capacity'. "A general definition", they said, "should encompass the elements of animal production goal, acceptable resource condition, and time." (id: 94). Applicability, however, "is of questionable validity in livestock production systems in Africa" (id 100). See also Seidl and Tisdell (1999).

almost reached. This means that the soil has reached its mineral-absorbing limit: many plants are no longer able to survive in this 'poisoned' environment and any surplus minerals will be rinsed out to the groundwater and thereby pollute this drinking-water resource.

The physical basis of the Sahel and Sahel-Soudan zone is a totally different one. Whether it is vulnerable is the subject of ongoing debates. "[P]astoral areas [here are] characterised by a so-called non-equilibrium environment…" with a "resource availability in these areas […] characterised by spatial heterogeneity and temporal variety" (Juul 2002: 189). Hiernaux (1996: 14) notes that "Sahelian vegetation appears very resilient to natural and pastoral stresses because of the strong dynamism of its seed production, dispersion and germination cycle". The system is used to 'natural' (climatic) extremes within and over the years. However, "grazing during the growing season can significantly affect production in the same season and may affect long-term productivity" (id: 13). Moreover, the resilience of the environment to year-long agriculture may be low. Declining soil fertility, erosion and changes in watershed structure lead to increased vulnerability to drought.

Thus, an actual physical basis is formed partly by basic natural processes and structures and partly by human influences that have altered the basic natural status quo and processes. These human influences on the natural basis as such are shaped by institutions and policies, for example those regarding property rights, being distribution, access and use-forms of these natural resources[51]. In addition, human institutions and policies also influence the right side factors of the **I = PAT** equation. Sometimes these influencing institutions or policies are not directly aimed at the natural resources or the population size, the affluence or the technology, but have other goals, while the influence discussed is only a side effect. Of course all institutions are embedded in wider 'environments', from regional through national up to even global, being structurally shaped situations or event-like.

Increasing scarcity

To use the dynamic aspects of the Environmental Science equation, ES should not focus on scarcity as such, but on the increase thereof. Because this study wants to focus on the local level, the deteriorating situation of local actors is of importance: the diminishing of 'Environmental Use Space' (see note 46) at the personal level. In other words, the cascade of the VoE diagram begins with an increase of the **I**[52] for a natural resource that is important for an actor (person), and/or with a worsening distribution of that resource.

The **I** is raised, diminishing the environmental space of users (meaning 'rising scarcity'), because of rising population pressure (either based on population growth, or on population distribution, or on both), affluence or technology or two or three of those together, under physical-biological circumstances that cannot counter-play this. For the individual actor, this 'negative' impact can also originate in, or be aggravated by, limiting access regimes. The influence of access to natural resources therefore plays a role at different levels.

As has been stated above, in the Sahelian context the phenomenon of a rising human impact on the environment can be questioned[53]. Scarcity of natural resources has been, and always will be, an inherent characteristic of the semi-arid and arid regions of the world. Inhabitants of

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[51] See for example Ostrom and Schlager (1996).

[52] From the I = PAT equation.

[53] Leach, Mearns and Scoones (1999), Mortimore (1998), De Bruijn and Van Dijk (1995).

these types of eco-regions are well adapted to these circumstances. With the insecurity of the climate and the wave-like pattern of abundance and want, they have developed a kind of fluidity in their institutions as well (Berry 1993), both in time and in space. Yet, the growing populations seem to reduce the fluidity of the systems, at least in space. Now distribution of the resources has become important. In addition, the fluidity does not exceed a certain level. This level may prove to be too low when environmental change passes the threshold that ecologists warn of[54]. When the system suddenly changes[55], personal scarcity may rise abruptly. Such a 'flip-over' can be due to extreme climate changes or to (direct) human impacts, for example caused by day to day unintelligent use of the resources or by events such as war[56]. In such instances, a real change in livelihood strategies, and not only flexibility, is required. "It is often hard for human societies to adjust their institutions and technologies rapidly enough to prevent sudden changes in environmental systems' behaviour from producing a grave impact on human well-being" (Homer-Dixon 1999: 191, note 46).

On the other hand, institutions sometimes change too quickly or in an unfavourable direction, at least for some local users. Already in non-scarcity situations, not all actors have the same position when it comes to negotiating the rules[57]. The fluidity of the institutions serves the powerful, especially when resources become scarcer. As stated earlier, it may be the case that a rising **I** is only perceived. Indeed, this perception can also be constructed by powerful persons for strategic goals. For example, perceived environmental change can be used by authorities as a pretext to overrule existing management institutions, instead of giving them time to adapt[58].

Thus, by way of institutions and policy the three basic factors, as well as the access factor, can be influenced directly (the box furthest to the left) or via feedback after the 'scarcity' has first increased or is perceived as having increased. To make it even more complex: limiting access practices can be installed by institutions to counteract the longer term **P** x **A** x **T** effect[59]. In that case they form both a negative and a positive feedback on the **I** (at least for the area under the regime; it can cause negative effects in other places, because of increased pressure there). Long-term and short-term as well as individual and society effects have to be detected. As regards the VoE diagram, societal effects are only interesting as long as they influence personal strategies.

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[54] Holling and Sanderson (1996: 67) warn that the renewal phase (the fourth phase in their ecological model of adaptive renewal) "contains the potential to jump to unexpected different […] systems."

[55] "Historical events […] may trigger savannas into a new ecological state." (Stott 2003: 2).

[56] See, for example, the situation in Chad (De Bruijn and Van Dijk 2003).

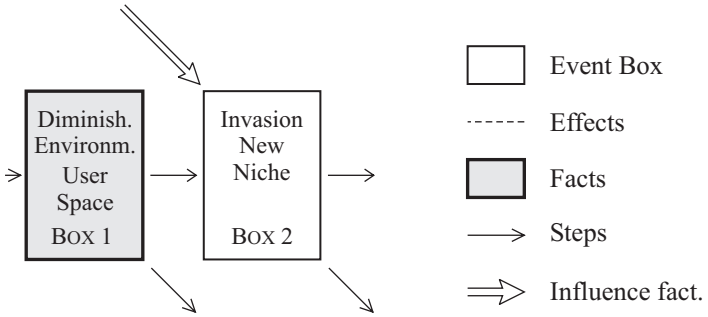
[57] Peters (2002).

[58] See Bächler (1999) over the instrumentalisation of the environment, one of his "key situations" in relation to natural resources engendering violence.

[59] Examples thereof can be found everywhere, both in developing countries and in the West. With regard to the latter, we can mention areas where only agriculture under strict conditions is allowed. Another example is 'indigenous people's reserves' that consist of land given back by the State to traditional ethnic groups to be used solely by them (e.g. see Aquino 2004).

Box 2

Figure 2.3 Middle part of VoE-Cascade



When people perceive their Environmental Use Space to be limited compared to what they need, want or are used to[60], they start intruding into other peoples 'niche' or assert the rights to their own niche right away (e.g. in the event that the **I** is increased by way of rising population numbers because of immigration). Officially, according to ecological science, a niche is 'the way in which a certain complex of natural resources, related to a certain place, is used'. Most of the time people in a scarcity situation search for niches that are more, or preferably even richly, endowed with the wanted resource[61]. The act of entering a niche may force the present user into a position of competition. An example of the same use of a resource in the same way in the same geographical area is that of two fishermen using casting nets in one specific fish-pond[62]. As we have seen in the case of Padmangay versus Davagang in the introduction, this can lead to profound conflicts over the resource.

However, there are possibilities of resource use other than that of exactly the same niche that cause different users to become competitors. If the resource is a 'moving' one, "transferred impact" may play a role. A moving resource can be used on different spots. But, once used at a first site, it is no longer possible to use it at a second site. The impact of use is transferred over time and space. This is the case, for example, when fishing with a net in a river influences the chances for a fisherman down-stream of catching the same fish. Then, although the users are situated at different spots, competition over the resource can still flare up[63].

When people use the same resource but in a different way, competition is only bound to occur if the uses are mutually excluding. An example of this is the use of a tree for fuel-wood or for building: these are different niches, but the user of one niche intrudes the other one and thereby decreases the possibilities of use by others. Another possibility of such resource use concerns the subsequent blockade of the use of a niche further away. Excluding types of use of one resource at a certain location will hamper the accessibility of another resource. Examples thereof are fish channels[64] or agricultural fields that impede the track of cattle to their grazing grounds. Obviously this can give rise to conflicts.

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60 See below the sections about influencing factors at the right side of the diagram and the phases of conflict.

61 Again, an example of the importance of 'abundance in scarcity' (see the discussion about the role of scarcity versus that of abundance of natural resources in the Introduction and earlier this chapter).

62 About use and management of fishing grounds in Africa, see for example Thomas (1996), Fay (1989), Harms (1989), Casimir and Rao (1992), Van Est (1999), Quensière (1994), and Barbier, Adams and Kimmage (1991).

63 Ecologically speaking the niches are different because when defining a niche it is not only the use of the environment for food that is important, but also the use thereof for other purposes (for example housing and shelter).

64 See Drijver *et al* (1995), Van Est (1999) or Loth (2004) about the sometimes km-long and metres-deep fishing channels traversing the Logone floodplain in Cameroon.

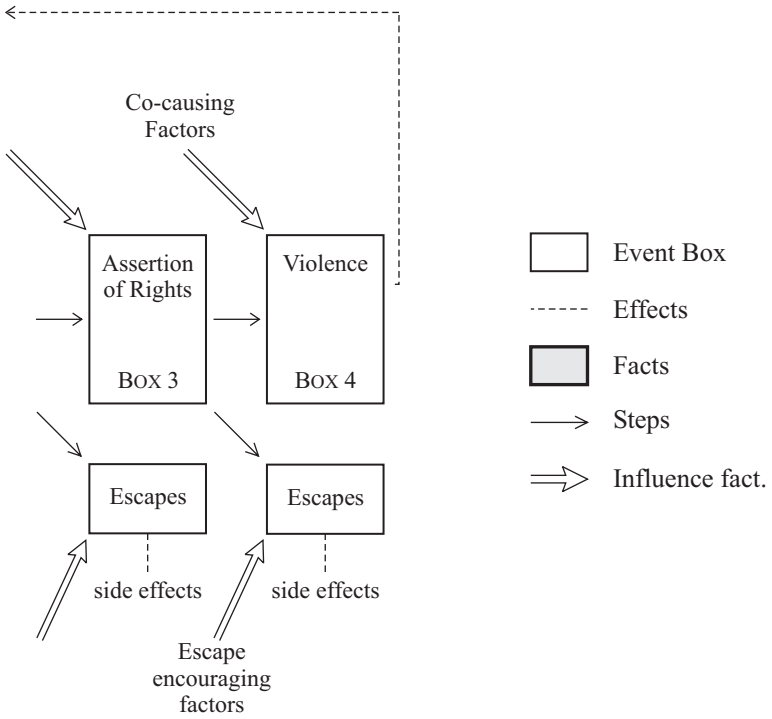
A possibility that can lead to the exclusion of the use of a niche by another user without using the same resource is the use of a resource in such a way that it influences the existence of another one in the same region. An example of this is the use of water for irrigation, such that the use of the resource fish is hampered[65] or the building of a dam to gather the water, thereby causing the fish to disappear downstream because the spawning grounds are no longer flooded[66]. Although this can lead to conflicts between users, the condition for such to occur is that the connection between the two phenomena has to be clear to at least the 'second' user.

In short, conflicts between users can flare up not only when using the same niche, but also when the impact of the use is transferred over time and/or over space to another niche. Thus, in the VoE diagram 'intrusion into other people's niche' also includes those cases in which the niche is not entered, but the possibilities of use by the other are diminished via transferred impact.

The first real step by an actor in the VoE diagram is the moment (s)he enters somebody else's niche. The choice for, and actual implementation of, this step is influenced by many factors. These factors are important in the analysis and therefore have a place throughout the diagram. I will discuss them in the next two sections. Sometimes the actor does not physically enter the new niche, but starts the assertion of rights straight away, that otherwise would be the next step.

Box 3

Figure 2.4 Right side of VoE diagram



[65] See, for example, the extensively documented Aral Sea history (e.g. De Villiers (1999), Smith (1995)).

[66] Examples of such an impact of dam construction are the Karnali and Arun dams built in Nepal (Himalayan Power Consultants (1989), Ives and Messerli (1989), Nepal Electricity Authority (1992)). But it is an effect that results almost always from big dams (e.g. Goldsmith and Hillyard 1987; Bernacsek 1984).

Following the Cascade to Violence from the intrusion into other people's niches, the next step is the assertion of rights to the resources, in casu the niche. This is only necessary if the other user(s) of the niche do not agree with the intrusion or the claim made without actual entry having (yet) occurred, after which these user(s) try to ascertain their rights. I call this 'conflict'. Here the word 'conflict' means 'collision of interests', in the sense that the actors go one step further than only wanting exclusive use of a resource: they (or (s)he) actually do (does) something - more than just 'sitting there' and telling everybody that it is theirs - to satisfy this want[67]. On the other hand, conflict can have another origin as well, such as a more normative one. Although these other possibilities are not the focus of my research, they are of great importance in the analysis. In addition, the reason to ascertain one's rights to resources can be influenced by world views and perceptions that (also) come into conflict. Without these other conflict causing reasons and triggering circumstances, actors would perhaps chose another route (in the diagram called 'escape'). Thus, these "influencing factors" have a place in the VoE diagram. They are presented, at each step, at the top half of the framework (see next sections for a further explanation).

Box 4 (See Fig 2.4)
When people oppose each other and both claim the rights to a certain resource violence may be chosen as a way out. 'Violence' here means: a physical attack against other persons or their goods, ranging from a simple one blow on the nose to more heavy clashes between individuals or groups and/or with damage being deliberately caused to material belongings. The remarks given above in relation to Box 3 and the step taken to reach this box, the step towards conflict, also regard the choice for violence or not. This step can again be influenced and triggered by many other factors and many other strategies can be used to ascertain someone's rights to the environment. The use of violence itself influences the conflict and therefore forms a (positive or negative) feedback loop in the VoE diagram.

In each step of the diagram, these factors and other strategies are indicated by ingoing and outgoing arrows. In a way, those in and out-going streams are the most interesting. Dividing the Cascade into four boxes connected by three causal arrows, the VoE diagram offers the opportunity to distinguish different influences at different times and then, in a real situation, identify the point or points at which the Cascade to Violence started (or starts) to be inevitable.

The framework describes three big basic steps and 'events' (in the 'event boxes'). In practice the steps may appear to be sub-divided into (sometimes even several) smaller steps. For example, in his schema, Homer-Dixon (1999) uses the "social segmentation" lemma. It emerges, according to him, as one of the social and societal answers to scarcity and forms, as such, one of the co-causes of the direction of violence. In the framework proposed here this 'step' is not voiced but it is certainly one of the possible interim steps between the 'assertion of rights' and 'violence'. On the other hand, though, segmentation in the sense of niche differentiation, with such being an 'escape' route in an earlier phase of the flow diagram, can be a conflict-preventing phenomenon. Moreover, one can question whether the development or increase of 'we-they' divides, as referred to by Homer-Dixon, did not already occur in a far

[67] For a more extensive explanation of the concept of 'conflict' see the Introduction and the section 'phases of conflict'.

earlier phase and is, as such, a co-causing factor in the unwinding of the Cascade that should have its place in the in-coming arrows of the influencing factors. As Bächler (1999: xvi) stated: environmental scarcity (what I refer to as: the narrative of environmental scarcity) can be used as an instrument "to pursue specific group interests [… and] becomes an (ideological) issue of group identity". These groups, then, have to exist already, albeit rudimentary[68].

Escape routes

Categorisation

Now we have discussed the central part of the framework from increasing resource scarcity to violence, all possibilities of actors to escape this route need attention. Each step from an 'event box' in the VoE diagram to the next, the actor can choose to divert his pathways away from the Violence Cascade flow. To describe this process 'A – non-A' models (see page 17), such as the approach to livelihood strategies and rational decision-making, are useful.

In a way, one could say that with growing (natural) resource scarcity the 'output' of a certain unit of resource has to increase. The two basic responses are: "Involution (= […] doing more of the same[69]) and Transition (= […] a qualitative system change)" (De Groot and Kamminga 1995: 76). The first is easy to do and does not require much of an investment but will eventually lead to a downward spiral because of a decline in labour productivity and the exhaustion of the resource and finally a collapse: this is the Malthusian path. The second is the one that Boserup highlights in her analysis: "Certain types of technological change[70] will occur […] when a certain density of population has been reached".

Apart from involution and transition of land-use, other responses to pressure are also possible. First, these may be agricultural, such as "the extension of cultivation into unsettled areas" (Moonen and Verolme 1991: 67)[71] or, as is the main item of this thesis, the extension of agriculture into niches already being used. Although the farmers then try to do "more of the same" they do so in a different place[72], where others are trying to continue doing the same as usual. Migration is a response that can be agricultural when farming is taken up in the new area, or non-agricultural when urban areas are sought. Other examples of non-agricultural responses are "… population control, manufacturing, or trade ..." (id). Even a kind of agriculture-influencing, non-agricultural response is possible, as we see in the study of Mazzucato and Niemeijer (2000: 301): "... agricultural performance is affected by the social organisations around production [...], in the study area people have intensified the uses of social networks for agricultural practices". This is more or less the same as Ostrom (1990), Ostrom and

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[68] See also the section on influencing factors on the right-hand side of the VoE diagram and 'phases of conflict'.

[69] I would add here: 'at the same spot'.

[70] Boserup herself spoke of yield increasing technologies. Nowadays soil conserving technologies are also included (see Mazzucato and Niemeijer (2000: 309): "Boserup's thesis is extended to the land degradation debate by arguing that as land becomes scarce, the technological change stimulated by population growth will move in the direction of conservation technologies in order to conserve the scarce, and therefore highly valued resource, namely land.")

[71] Strictly speaking this is not an answer that increases the output of a unit of resource. As long as there are still 'unsettled' and useable areas, the scarcity of the resource is not extremely high. Yet, in reality, most 'unsettled areas' prove to be the niche of one group or another, or are claimed by the State for public goals.

[72] Sometimes the incoming farmers even consider the place as being the same because they only see it as continuing their fallow rotation schedule as they have done for ages. In such situations they do not at first perceive land scarcity. This notion only arises at the moment they encounter the other users.

Schlager (1996) and McKean (1992: 258-261) have pointed out: they focus not only on land use transition but also on the ways people organise common use so as to prevent a diminishing of the EUS per user, or even increase output. In the VoE diagram this forms the feedback from an increased I to the box "institutions and indiv. strat." or it is directly incorporated in this box, as a kind of 'prevention' strategy of the community.

Of course, in the long run the institutional answers to resource scarcity should cause (some) qualitative system change to increase the output per unit, or they should engender a broad transition that even surpasses the boundaries of agriculture (for example changing an agricultural society in an industrial one).

Institutional changes can also play their role further to the right in the VoE diagram, where they may influence decisions about (e.g.) the use of violence or not. Then they are 'co-causing factors' or 'escape encouraging factors'.

Different forms of capitals

To categorise this ad hoc list of possibilities and to try to come to a more exhaustive enumeration I will use Bebbington's (1999) five types of 'capitals' that "give [people] the capacity to be and to act" (id: 2022), and thus to build their livelihoods[73]. In short, livelihood strategies consist of the use of one or more of these 'assets' to enlarge (or at least sustain) the total of the capital[74]. The assumption is that an actor deliberately capitalises or enlarges his or her capitals. Sometimes a person eats into one of the five capitals to enlarge the whole, as a kind of investment. As a consequence, the rationality, spoken of here, does not only include economic deliberations. As we will see from the enumeration and discussion of Bebbington's capitals, social, cultural, political and moral elements (etc) are also considered. Thus, in the VoE diagram, the escapes are all composed of the use of one or more or even a mixture of Bebbington's capitals. These capitals are: Natural, Produced, Human, Social and Cultural capital[75]. Instead of intruding into other peoples' niches, nearby or far away, (or physically defending ones own niche) an actor can choose to invest in another type or aspect of 'natural' capital or to extend the investment in one of the other capitals. The other capitals can also be used to support the assertion of rights to one's niche.

Examples of the investment in each of the (other) capitals, together with an explanation of their content, are:

1. Investment in Natural Capital means enhancement of the productivity of the threatened niche or intrusion into a niche not (yet) being used[76]. This may, if possible, be a further niche specialisation and thus lead to segmentation of society albeit – in contrast with Homer-

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[73] Although 'Livelihoods Research' does not specifically focus on conflicts and conflict development – it concentrates on reasons for poverty and on methods to overcome it - its notions, concepts and methods are very useful for the fore-lying study, because it studies social relations and the diversity of modes of livelihoods (and the changes thereof) "at the micro-level, but related to analysis of the structural, historical and institutional elements of the macro-context" (Murray 2001: 2) and the influences of policy. So, without specific use of the Livelihoods Research framework (as far as this exists), I will implicitly be guided by this research field (see also chapter 3).

[74] See, e.g., Murray (2001: 6); Zoomers (2001); Kaag *et al* (2004).

[75] Bebbington (1999) indicates the dual position of his five capitals, being things that "allow survival, adaptation and poverty alleviation: they are also the basis of agents' power to act and to reproduce, challenge or change the rules that govern the control, use and transformation of resources" (p. 2022). With that they are also influencing factors that will be discussed in the next sub-paragraph.

Dixon's assumption - most probably in a positive way. Examples pertaining to the first option are increasing the soil fertility through the application of fertiliser or animal dung, or using mechanic weeding equipment. Two theories that explain certain strategies for enhancing natural capital are that of Von Thünen and that of Boserup. I will elaborate on them when discussing the use of capitals in escape routes (see below).

2. Produced Capital consists of stock (food and animals), "housing, equipment, machinery, energy, infrastructure, drinking water, health care [*system*] and education [*system*]" (Henkemans 2001)[77], as well as saved money, loans, subsidies, remittances and pensions (Bebbington 1999, Serageldin and Steer 1994). Examples of extending this capital are: building a water pump for drinking water; a small, local barrage to hold water for cattle in the dry season; or building a road to make the marketing of products more feasible.
3. Human Capital means personal capabilities, skills and competences. This is based on health and physical composure, but also on knowledge and personal characteristics such as charisma or intelligence, etc. This capital can be extended by investing in schooling and training, improved health care, etc.
4. Although a lively discussion is going on about the exact content of the concept Social Capital, it can be defined with a certain communal agreement as: "The stock of active connections among people: the trust, mutual understanding, and shared values and behaviours that bind the members of human networks and communities and make co-operative action possible" (Cohen and Prusak 2001: 4). These active connections can be realised at an individual or a higher congregation level, via group and community up to the nation and, in general, the macro level. Whether or not the definition has to be limited to one of these levels is subject to discussion[78], but the fact that individual level social capital (or even group level social capital) is not the same or can even hinder higher aggregate level social capital is acknowledged (see below: when 'Bonding' becomes exclusive). The World Bank (1999) distinguishes personal and collective social capital, the latter is: "norms and social relations embedded in the social structures of societies that enable people to co-ordinate action to achieve desired goals." (in Tadepally 1999: 45).

   A society is organised along horizontal and vertical (= hierarchical) linkages. With an eye on these two dimensions, Social Capital can be divided into properties such as **1) Bonding**: referring to "local institutions that are necessary to bind individuals together to pursue collective needs" (Warren, Thompson and Saegert 1999) and to "exclusive and homogeneous networks" (Paxton 1999) of "people-such-as-us" (Portes and Landhold 1996). The latter is the societal segregation Homer-Dixon mentioned as a cause of violence. **2) Bridging**: referring to "building ties to other communities" (Warren, Thompson and Saegert 1999), "overcoming social divides" (Portes and Landhold 1996) and **3)** the vertical connections = **Linking**: referring to "the capacity to gain access to resources, ideas and information from formal institutions beyond the community" (Portes and Landhold 1996), also embedded in the term '**Political Capital'**, that is "the informal relationships and norms that links civil

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[76] The term 'used' reflects the different notions about rights to resources, that is "rights to own resources, rights to use [(have access etc., RN)] resources, and the right to intervene in resource situations" (Dietz 1996: 41).

[77] To prevent confusion with human capital aspects, I have added the words 'system' (in italics).

[78] Even some founding fathers of the concept, such as Bourdieu (1986), Coleman (1988) and Putnam (2000), differ in their definition of the concept and their opinion of for whom the capital is a resource.

society and the state …" (Bebbington and Perreault 1999).
Broadly speaking, to arrive at the possession of Social Capital two general domains have to be represented: Structural Social Capital, being organisations, roles, rules and networks, and Cognitive Social Capital, being attitudes, norms, values, trust and reciprocity[79].
Enhancement of Social Capital can be obtained by, among other things, bride-wealth investments, gifts to neighbours, strengthening family ties, praying together, organising women groups and mutual cash facilities, as well as working parties and building (new) institutions.

5. The term Cultural Capital is even more disputed. Although Bebbington himself distinguished it clearly from Social Capital, some other scholars do not acknowledge the separate existence of one of the two. Some, such as Berkes and Folke (1994) and Gadgil *et al* (1993), do not use the concept of Social Capital, but incorporate the notion, together with Institutional capital and Political capital, within the Cultural Capital domain (Berkes 1996: 91). Others want to divide the concept's contents (as described by Bourdieu[80]) between Human Capital (the aspects that have to do with knowledge and learning and the insights into the value of knowledge as well as the possession of diplomas), Social Capital (when connected with religion, for example[81]) and even Produced Capital (the economically obtainable objectified objects of Bourdieu's Cultural Capital (see note 80)). Furthermore, several aspects of culture are not comparable to the 'capital' with which or in which persons can invest, but are fixed to a person's (or society's) personality and his/her identity. It is this line of thinking that is followed in this thesis.

There are many examples of interaction between capitals, as we can see for example in the above-mentioned case of Mazzucato and Niemeijer (2000) concerning the influence on agriculture of social institutions. "On the one hand there are interactions within each type of asset […] at the same time each asset clearly interacts with the others [..] synergistic [or …] destructive" (Bebbington 1999: 2032). Being an active member in the collective social capital domain (and thus enhancing it) increases personal social capital as well. Enhanced produced capital in the form of more drinking water pumps also has a positive effect on human capital, by providing safe water and thus more healthy people. If the pumps have to be built by the community members themselves, a certain degree of social (bonding; bridging) capital is required. For the construction of more technically advanced wells, help from outside is required and 'linking' social capital forms become indispensable. Using savings to buy a plough (to increase both produced capital and natural capital), instead of organising the monthly beer party, decreases social capital. A status (= social position) in a neighbourhood can be quickly

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[79] See for example Francis (2002).

[80] "Bourdieu (1986) distinguishes three forms of cultural capital. The embodied state is directly linked to and incorporated within the individual and represents what they know and can do. Embodied capital can be increased by investing time in self improvement in the form of learning. As embodied capital becomes integrated into the individual it becomes a type of habitus and cannot therefore be transmitted instantaneously. The objectified state of cultural capital is represented by cultural goods, material objects such as books, paintings, instruments, or machines. They can be appropriated both materially with economic capital and symbolically via embodied capital. Finally, cultural capital in its institutionalised state provides academic credentials and qualifications which create a "certificate of cultural competence which confers on its holder a conventional, constant, legally guaranteed value with respect to power." (Hayes 2003: 248). "Bourdieu favours a nurture rather than a nature argument. …" (id 2003).

[81] For reasons in the social domain to change religion see, e.g., Van Santen (1993).

destroyed if social norms are ignored[82]. In most Third World communities 'rich' people have to share, otherwise they lose social capital. Van Est (2000, personal comment) tells the story of her interpreter in North Cameroon who, with the money earned, bought a 'pouse-pouse' (a kind of wheelbarrow) to earn money as a transporter for others. Because he did not spend his earnings on his co-villagers, they set up a trail of wheel-prints from a richer neighbour's house to his, and accused him of theft of the other wheelbarrow. He indeed ended up in jail. Social capital is useful to enhance human capital, for example, in "collaborative learning" (Allen *et al* 2001: 1). Last but not least, if too much social capital and/or natural capital is lost at a certain place, people can decide to use their produced and human capital to move away and try their luck elsewhere[83].

Use of capitals away from violence

Following the unwinding of the VoE diagram (see also Fig 2.5), the number of options for escaping diminishes. As has been stated, a decreasing 'EUS' can be counteracted by using all five capitals. Sometimes, some of these capitals are indispensable. For the transition of land-use, for example, pressure on the land is not enough. Even Boserup herself warned against "turning the argument upside down":

> *"if it is true […] that certain types of technical change will occur only when a certain density of population has been reached, it of course does not follow, conversely, that this technical change will occur whenever the demographic prerequisite is present." (Boserup 1965: 41)*

Technological improvements require knowledge (human capital) and the availability of the techniques, materials and utensils. Boserup (1980: 413) also highlighted the importance of produced capital for making options implementable[84]: "local populations in savannah regions – and in other rural areas – are often prevented from carrying out such modernisations due to a lack of rural infrastructure in the area in which they live …" To improve both the supply of the technology and the off-take of products, social capital in the linking sphere is necessary. Most of the time local individuals cannot invest in infrastructure because it does not give them enough personal returns[85]. There is no motivation to implement this option, even when actors have enough (financial) capital. Outside institutions have to be involved, that is external authorities, aid organisations or external (private) enterprises with interests in marketable rural products[86]. The latter corresponds to the location theory of Von Thünen (1826), an explanatory theory of land-use transition based on economic principles, such as "… simple micro-economic assumptions and profit maximisation" (Cleuren 2001: 28). The motivation for intensification, it says, will only be high enough when the distance to a market centre is small enough. "The economic profitability of crops and land decreases with increasing distance from markets." (id). Less intensive land-use patterns will be found in concentrical circles further away from the market centre, with the farthest circle, where pioneers start to clear until then empty bush, being called the 'frontier zone' .

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[82] This shows that knowledge about cultural patterns is part of social or human capital.

[83] Migration is one of the reactions repeatedly described in the literature (e.g. Quin (2001)).

[84] See next section: 'influencing factors'.

[85] Investment in infrastructure suffers from a kind of prisoner's (or free rider) dilemma.

[86] For example, in North Cameroon, several roads have been built and are maintained by the SODECOTON, the parastatal institute that manages the cotton production-chain.

In contrast to the VoE diagram, migration in the theories of both Boserup and Von Thünen, only figures as an escape route from pressure areas into 'empty' space. Indeed, the choice for migration is influenced by the total set-up of actors' capitals. In Von Thünen's theory, migration takes place by people who lack capital to invest in the intensification. They move up to the outer circles, where the pressure on the land is less because of its lower economic value. In Boserup's theory, migration is seen as a last escape from starvation in cases in which the population does not dispose of enough human capital in the form of "knowledge of any types of fertilisation techniques." (Boserup 1965: 41).

None of the two theories mentions the negative impacts and effects of migration that made me place the phenomenon at the core of the VoE diagram (box 2). When encounters with other groups are mentioned, only the "positive learning effects" (Boserup 1965: 43) are voiced. However, the extreme violence by new immigrants in the Thünian frontier zone of the Brazil forest fringe[87], for example, cannot be seen as the result of an escape route away from the Violence Cascade.

Yet, not all invasions of new areas lead inescapably to violence. If another niche has already been entered, apart from retreating to the former or yet another niche, thereby starting again as it were at the beginning of the framework, in theory the option of investment in the current natural capital is available and will certainly be used (denuding of the bush, for example). However, this can be read by others as an assertion of rights and then forms the transfer to the next 'event box' of the VoE diagram. Moreover, trying to be accepted as a newcomer (sometimes by acting as an almost invisible vulnerable person who only needs a very small part of the new niche and on other occasions by acting as the big giver that helps the new community) is the most significant option in such a new niche status, besides launching into conflict. The new situation, then, demands investment in capitals, such as social capital. Strengthening friendship bonds and founding new relationships is an indispensable aspect. If the new niche has been physically positioned in a new area[88], 'old' cultural aspects of social capital are very difficult to use (although overlapping belief systems and values may help) and produced capital is most probably spent on movement to the new area. If some savings or stock are still left, they can be used to increase the social capital. Knowledge of the social fabric and cultural set-up and rules of the new society is important and forms a human capital type of asset that can be enlarged and used.

If the actor is opposed by others and has started to claim his rights to the niche, investment in the natural capital is mostly only done to underline the assertion and is therefore no longer an escape route. In Africa, the planting of trees as an investment in natural capital is a good example of an assertion to the land itself[89], although there are several places where tree planting does not enlarge peoples' position *vis-à-vis* the land that is planted out. An alternative way to 'escape' can only be found via the other capitals. Social position, alliance forming, knowledge about recent laws, powerful villagers and the positioning of the resources, are all assets, as in the former step, via which the use of violence can be kept at bay. Demands, negotiation, mediation, arbitrage and litigation, as well as successful threats, all feature in the human and social capital domain. The knowledge and intuition of which forum c.q. institution is the best

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87 See Cleuren (2001).

88 This means: a real migration has taken place.

89 For that reason several landowners do not want the users of their land to plant trees.

for resolving the problem also lies in the human capital domain, whether or not supported by social capital, which helps to augment this kind of knowledge.

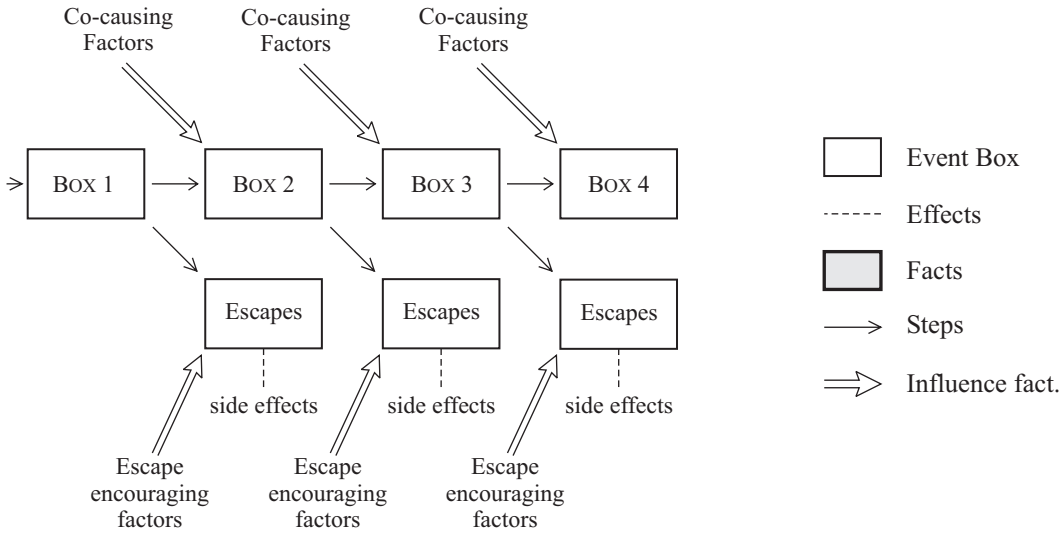
It has to be noticed, however, that a conscious unwinding of the Cascade to Violence will make actors invest in those capitals that will help them to be successful in a later stage. I am going to study these investments under the heading 'influencing factors', since the prior build-up of certain 'capitals' co-determines the route to be followed.

Influencing factors

Categorisation

The last important part of the VoE diagram comprises all the factors that influence actors' 'steps'. Both at the top and the bottom of the diagram, such factors are indicated as, respectively, 'co-causing' and 'escape encouraging' factors. The top factors all depict factors that make actors choose for the direction of unwinding of the main flow-route, the Cascade towards Violence. Each new step again opens the possibility of escape. Therefore, at the bottom of the diagram the factors are grouped which help actors choose other options, away from the 'Violence Cascade'.

Figure 2.5 Escapes and influencing factors in VoE diagram



There are many factors that influence actor's decision-making and the implementation of these decisions. The position of capitals (as defined by Bebbington 1999) as something people have and use or want to have and choose as an escape route, has already been described in the section on escapes. However, in decision-making, more fluid and abstract dimensions are also important. Indeed, Bebbington's capitals are again involved at different moments, now as influencing factors, in the schema of De Groot and Kamminga (1995) that I used to categorise all influencing factors. Based on the more limited 'options and motivations' divide of the 'Actor-in-context' model of the social sciences, De Groot and Kamminga define four concepts:

> *"1)* ***Potential and implementable options*** *(potential options are defined as all actions the actor could conceivably implement, if he availed of all necessary knowledge, power funds and so on*

> [in short: of an unlimited amount of 'capitals', RN]. *The implementable options then are the ones he can in fact choose between, given his resources; 2)* ***Autonomy*** *(autonomy is defined as precisely what makes this difference between potential and implementable options.[..]. Autonomy may be separated into (1) a set of positive resources, which may be summarized as the actor's economic resources, social capital, knowledge[90], moral resources, organizational capacity and so on, and (2) a set of negative restrictions such as prohibitions, taboos, denied access, the conditions set by a permit or a contract, and so on); 3)* ***Objectified motivations*** *(This somewhat ambiguous term refers to the motivational factors in the actor's decision-making, 'objectified' in the sense of being put as much as possible in simple quantitative terms such as costs and benefits in monetary units, yields in kg per hectare, working time in hours, and so on.); 4)* ***interpretations and interpretative frames*** *(..[…] .. 'interpretations make the difference between the objectified motivations and the motivations as they really are for the actor. Work is not only measured in hours only, for instance; there is 'good work' (e.g. dynamic work, men's work, status-rich work, work that helps the community, convivial work) and bad work, and that makes a lot of difference in the working hours as they really count for the actor. Crops are not just kilograms and calories, but kilograms of things that taste good or bad, that belong to being home, that round of a real meal, and so on. And even money – some of it tastes bad, and some of it counts double. At a somewhat deeper level, interpretations are connected to the 'HEC' domains[91] of reasoning, to self-images and culture…." (De Groot and Kamminga 1995: 79).*

And, as has been said before, the different interpretations and interpretative frames of actors generate different perceptions by people of their surroundings *and* of the influence of their behaviour on that environment (Burke 2001), as well as of their interpretation of the 'arrived' information. It goes without saying that culture is an important factor in the shaping of world-views and interpretative frames. As such it influences the "autonomy" of actors. Nevertheless, "culture does not 'cause' behaviour ..." (Avruch and Black 1993: 135). Situation, "circumstances and historical time periods" (Druckman 1993: 33), as well as (collective) memories decide which "cultural imperatives, […which] broad constraints within which a wide range of […] behaviours can occur" (Druckman 1993: 33) are chosen as a guide for action. However, "culture is a perception-shaping lens or […] a grammar for the production and structuring of meaningful action." (Avruch and Black 1993: 132). In addition, 'human capital' in the sense of education also shapes the interpretative frames of actors.

Relationship of categorising concepts

Indeed, Bebbington's capitals influence the third and fourth categories of De Groot and Kamminga. However, they play their greatest role in the first two categories. In the same way, the entitlements and endowments of Leach *et al* (1999) can be assumed to have been incorpo-

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[90] Not everybody has access to the same and the most important information and knowledge. And, people also differ in the way they 'accept' and internalise information. Existing perceptions (category 4) colour 'arriving' knowledge.

[91] This refers to the different ways people can be motivated for their actions. Apart from the economic mode, De Groot (1992: 355) discerns two more "modes of reasoning" or "perspective", being the '*homo honoris'* mode and the 'ethics of care' mode. Together these form the 'HEC model'. For some cynics, the '*honoris*' and 'care' modes are only derived forms of the 'economic' mode. See, for example, the reasoning of Ostrom (1990: 88-89) that underlines a long-term economic (personal and community) benefit springing from the existence of norms in common resource management, whether they be 'honour' or 'care' based:
"*Extensive norms have evolved in all these settings that narrowly define 'proper' behavior. Many of these norms make it feasible for individuals to live in close interdependence on many fronts without excessive conflict. Further, a reputation for keeping promises, honest dealings, and reliability in one arena is a valuable asset. Prudent, long-term self-interest reinforces the acceptance of the norms of proper behavior*."

rated into the categories of De Groot and Kamminga.

The term 'autonomy' can be seen as consisting of Leach's terms 'endowments' (= rights and resources actors have) and 'entitlements' (= legitimate - in the sense of both formal and customary law as well as other social norms - effective command over alternative commodity bundles), and the mapping (c. q. gaining access) thereof. Although not mentioned explicitly by Leach *et al*, these are all co-shaped by the 'restrictions' within the 'autonomy' category of De Groot and Kamminga.

In the same way four of the five capitals of Bebbington can be seen as endowments-entitlements that can be used in different bundles as well as in mutual substitutions. As such, these lead to 'capabilities' (= "what people can do or be with their entitlements", as defined by Leach et al (1999: 233)) to actors[92]. The capitals therefore define the autonomy of actors. Only cultural capital is of another order, as is mentioned already. Culture (not cultural capital) does connect more with the 4th category of De Groot and Kamminga. Additionally to co-shaping the interpretative frames, it may have to do with the restrictions connected with 'autonomy'. It sets (and changes) the structures and institutional regimes within which the actor has to act. The autonomy defining macro structure of the global market, for example, is shaped by the western based capitalistic culture.

Leach's and Bebbington's frameworks show the dynamics of the autonomy concept. As can be seen specifically in the second set of the autonomy description (but also in the first one, if examined more closely) power relations and positions (that are part of social capital) are very important in the construction of endowments and entitlements or 'capitals'. Leach *et al* (1999: 234) regard institutions, ranging from micro to macro and sometimes changing, as shaping these processes. This relates to the outward contextualisation of the "actor-in-context" method of De Groot (1992). Influences on actor's decisions and strategies can be traced in an ever widening field of secondary, tertiary, etc. actors, who are themselves influenced by a same web of connected categories.

Similarly to the 'autonomy' category, the other three categories of De Groot and Kamminga should not be approached as being static. For example, options and motivations are constantly changing with the shifts in personal capitals that, in turn, are caused by strategies based on the options and motivations. Neither is culture an everlasting stock of 'things'. It also has changing aspects that are in constant interaction with the more enduring factors. Moreover, the birth and development or death of institutions, or changes in structures beyond the scope of individual actors changes options and motivations as well as interpretations. In addition, interpretations and their frames alter whenever knowledge grows or power exercising demands shifts. Even objectified motivations change with market change and price differences.

An important illustration of this constant and mutually dependent change is the fact that the moment of choice to follow one or another route of the VoE diagram is determined by the pertaining factors and also influences the outcome. "People may be too poor and the environment too degraded to enable a cross-over to the [transition] response" (De Groot and Kamminga 1995: 74). We can call this the 'poverty trap' with regard to natural resources. In addition,

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[92] According to Bebbington (1999: 2032) his capitals are assets or compose of assets of rural people. What is important are "the ways in which people are able to access, defend and sustain these assets and the abilities of people to transform those assets into" better living conditions and better asset and asset-transformation conditions.

Homer-Dixon (1991, 1994, and 1999) warns of the effect of a certain level of resource scarcity under certain conditions on the possibilities for escaping this same scarcity. While highlighting the difference between neo-Malthusians and neo-Boserupians and while discussing the possibility of the absence of innovation[93], he stresses the importance of the 'in-between' position and the analysis of the whole complex set of different influencing factors.

A-rationality

The effect of the moment of choice highlights the fact that any rationality has to have a long time horizon. In addition, it has to deal with a large number of uncertainties with respect to what the future will bring. "Uncertainty is endemic to natural systems" say Hanna and Jentoft (1996: 43), to which I would add: and to social systems. Nevertheless, within the limited possibilities they have, people are certainly guided by conscious calculations. For example, the choice for agricultural transition in times of population pressure is a choice for less labour efficiency[94]. The rising land scarcity and the rational calculation of labour input versus output may result in the choice for a one-time investment in violence via new niche-invasion rather than the ever-continuing higher labour costs of intensification, especially when markets are too far away[95].

Calculations can also be connected to values other than economic ones. Rational Choice Theory "views humans as intentional actors with rational correspondence among their perceptions, preferences, decision-making, and behavior [...], it also recognizes that individuals hold non-economic preferences, such as love and respect" (Burke 2001: 455-456)[96]. Thus, these rational considerations have to be taken into account when studying actors' decision-making and the implementation thereof.

However, Rational Choices no matter how broadly defined and no matter how well the 'colouring' of the information is taken into account[97], are not the whole story. Sometimes humans do not calculate at all. Even if actors have access to the right and comprehensive information, "[t]hey often do not make efficient use of it" (Burke 2001: 467). Most of the time they just do what their fore-fathers did, that is act according to tradition and according to what they have 'seen' being done. To that has to be added that, although perhaps intentionally 'rational', actual behaviour can be far from that because, as Ostrom (1990: 21) puts it: "The differences between those who have and those who have not extricated themselves from commons dilemmas may also have to do with factors outside the domain of those affected. Some participants

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93 In contrast with the first, who give primacy to natural factors, "[e]conomic optimists and distributionists emphasise social factors, that may hamper technological innovation, but they differ on which social factors are important: economic optimists stress market failures and bad economic policies and institutions, whereas distributionists emphasise social structures and political behavior, especially skewed distribution of wealth and power among classes and groups." (Homer-Dixon 1999: 43).

94 According to Boserup (1965: 32) the "output per man-hour" declines in intensification. She said that, because the fall in efficiency is a price to be paid, "the shift from efficient extensive systems to less efficient intensive ones [are only made] when driven by the necessity of feeding more individuals." I would add: 'and when no other systems have a more positive cost-benefit calculation'.

95 See Von Thünen's location theory; e.g. in Cleuren (2001) or De Groot (1999).

96 See also note 91 about HEC domains.

97 As mentioned earlier, most of the time information is not neutral and objective but coloured by previous perceptions and manipulations of both the information itself and the perceptions. This may suggest non-rational reactions, but taking account of actor information, deliberations can still be very rational.

do not have the autonomy[98] to change their own institutional structures and are prevented from making constructive changes by external authorities who are indifferent to the perversities of the commons' dilemma, or may even stand to gain from it. In addition, there is the possibility that external changes may sweep rapidly over a group, giving them insufficient time to adjust their internal structures to avoid the sub-optimal outcomes."

Last but not least there is the non-rational, even non-reasonable, behaviour of humans 'not having control over themselves'; a state of mind which everybody encounters one day or another but which in general depends on personal characteristics (see Sandole's list in the next sub-section). As such, it is therefore related to the second category of De Groot and Kamminga: Autonomy. Some scholars even see emotion as one of the basic features of human behaviour. Upreti (2001: 27) notes that "when people perceive injustice or conflict in their society, they assess it with emotions and act or react accordingly". Scimecca (1993: 213) also considers that "deep-seated conflicts are often irrational"[99]. Although perhaps less frequently applicable to land-use practices earlier in the diagram, where highly rational notions can prevail in setting the strategies, all these different aspects of human choice are very relevant specifically to conflicts and their genesis and development [100].

Influencing factors on the right-hand side of the VoE diagram

In the early (left-side) phases of the flow-chain, strategies other than the assertion of rights are possible. There is still a broad range of actor options and motivations. This is indeed what can be seen in the field. The success thereof decides how vulnerable actors feel, how they perceive their insecurities and thus how much emphasis they will place on the assertion of rights to the environment later on. Sometimes the feeling that this environment is indispensable either for themselves or for their offspring is an important factor in their decision to resort to violence. Sometimes natural resource insecurities are at best a trigger in an otherwise unsatisfying situation. In other circumstances, actors choose a non-violent way to overcome the conflict concerning resources.

During the history of social sciences the development of conflicts into violence has been a major field of inquiry. Different schools have proposed different theories of explanation, although the concept of "basic needs" always played a big role. For example Burton (1993: 58) stresses that "… human needs deprivation forced the individual to act in ways that would otherwise not be chosen." With the basement of (violent) conflict in basic needs, most theories also include contextual and structural factors. Sometimes only as variables that determine the availability of the needs itself: "Any system [...] that fails to satisfy [...] people's basic human needs and long-term interests will generate instability, political repression and violence." (Rubenstein 1993: 153). Others, like Van der Merwe (1993: 266), stress that those needs are only one factor between others: "If human needs are seen as one aspect (present to a greater or lesser degree) of many real-world conflicts, rather than the defining characteristic ..."

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98 See section 'categorisation': point 2 of De Groot and Kamminga: set of negative restrictions of autonomy.

99 See also Röling (1985).

100 To contradict these nuances: Davis (1999) has found that "even within a category of political action [violence] often thought to be dominated by fanatical and irrational individuals who act on mere reflexive impulse, there is strong evidence that agents engage in the process of responding systematically to the constraints and opportunities that they face."

To achieve a greater insight into the reasons and possibilities of choice during the last (right-hand side) phase of the VoE diagram a combination of several of these theories will help the best. "The recognition of the multidimensionality [of conflict] should sensitise us to the limitations of specific approaches that offer only partial solutions ..." (Van der Merwe 1993: 273). Thus, because it is put together from theories and paradigms from "*all levels* to the development of conflict" (Sandole 1993: 20) I refer to Sandole's list for a "basis of a generic theory on the initiation and escalation of violent conflict" (Sandole 1993: 20-21). As can be seen, this generic theory will be firmly based on the *needs* paradigm.

Sandole's list starts from biological and physiological mechanisms that generate a certain propensity to violence of human beings. This requires "some kind of stimulation to be activated […] which can be influenced by *learning*" (id). He then articulates the existence of human beings' biological "basic *needs* for *security*, identity [such as ethnicity] and the like". In this biological-psychological domain, others add the need for a "social life" (Clark 1993: 47), even "associational or organizational life" (Brown 1993: 165) and "needs that arise out of self-awareness", such as "the need for sacred meaning", "creativity" (Clark 1993: 47), "recognition, solidarity, and personal development" (Rubenstein 1993: 150) as well as "autonomy" (Burton 1993: 58). Buruma and Margalit (2004) consider humiliation as a driving force towards the use of violence. Apart from the general term 'security', Sandole does not mention the 'normal' basic needs but, for the sake of completeness, I add food, shelter and clothing. However, when discussing the role of physiology, he does refer to what I called non-rational and non-reasonable reactions. When the needs are threatened, or "*frustrated*", he says that the "physiological mechanisms may come to dominate the actor's […] rationality". That means that the actor then resorts to violence.

Although the suggestion that violence is a non-rational choice in which limbic systems dominate the more highly-developed brain may be true for certain situations, as a general concept of the origin of violence it contradicts Sandole's remark about the effect of learning. Indeed, the use of violence can be perfectly based on conscious cost-benefit and risk calculations, in which the brain masters the emotions. Then not only the direct goal plays a role, but also longer term societal positions. In so-called 'cultures of violence', such as some of the Latin American or the Sicilian ones[101], social status may, for example, depend on the early, fearless (and preferably effective) use of violence.

The threats and frustrations that play an important role in driving people to violence can be caused by many things. For example, the memory of past violence can cause fear of physical attacks and loss of life that makes people strike pre-emptively[102]. This is one of the reasons why causes of the *start-up* of violence are often different from those that *continue* it (see Sandole 1999)[103]. Many times perceived or indirect threats play a role. "Frustration can be fed by perceived structural violence" (Sandole 1993: 11)[104].

The well-known concept of 'relative deprivation', as voiced by Gurr (1970), is a variation of this theme, in which actors perceive a discrepancy between "resources to which one feels entitled and […] resources which one feels capable of acquiring and keeping" (Sandole 1993: 12).

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[101] See for example Kruijt (1997) or Cottino (1999).

[102] See Oketch and Polzer (2002) about Burundi: "… the importance of fear as a motivating factor for killing."

[103] See also the last of Bächler's (1999) five key factors in conflict causation: spill-over from an historical conflict.

Relative deprivation is explained mostly as a situation of initially increasing welfare, followed by a decline and thus a gap between expected and real satisfaction of needs that triggers people's aggression against the State and its elite (Davis 1962; Gurr 1993). This is even more so, when this elite has both a better societal and economic position than its subjects and when they (or the State institutions) are rigidly trying to maintain the status quo (Huntington 1968)[105]. This is a reaction by the elite to the threat of diminishing well-being, a fear of the loss of wealth. Indeed, Gurr refers to physical needs and not so much to the meta-physical ones listed above.

These physical needs (or wants) also play a role in the type of relative deprivation that plays a role in the greed variant of environmental conflicts. As depicted by Collier and Hoeffler (2002: 21) a combination of greed and grievance models makes more sense in explaining violent rebellion than one of them alone. Here, it is the possession of fewer resources by a person or group compared with what others, like the elite referred to, have that sets the frustration in motion.

Mostly, though, greed for resources is mixed with greed for power (the one stemming from the other and *vice versa*[106]). Moreover, conflict and possible subsequent violence only arise when another party puts forward a counter claim to the wanted resource, whether out of their own greed or out of grievance. In their articles on the incredible violence in the Great Lakes region of Africa, Oketch and Polzer (2002) and Bigagaza *et al* (2002) stress that the greed of the elite for the power to extract wealth from the scarce resource land, and its subsequent manipulation of the masses, only led to the massacres because poor farmers indeed reacted on the basis of a threat to, or the actual lack of, subsistence possibilities. However, it has to be born in mind that defining the motivation for resources as based on greed or grievance is a moral (and etic) choice[107]. The observer decides whether the party that strives for a resource has, in general, enough to meet its basic needs and is thus greedy, or acts from grievance because it does not have enough. Yet, as can be seen in the ever-expanding list of different (possible) basic needs given above, it is difficult to decide whether or not people's basic needs are threatened. Apparent greed can in fact be a grievance in another domain.

Another variation in the frustration realm is "Galtung's *rank disequilibrium* [that] refers to discordant locations of actors along various indicators of socio-economic (and other) measurement" (Sandole 1993: 20). This frustration-aggression mechanism can be recognised in Richards' (1996) observation that the Sierra Leone militia[108] specifically consists of more highly educated young men from poverty struck families and with no access to better (power) positions within society[109]. It has to be stressed, however, that Galtung adds to his theory that "these extreme forms of aggression are unlikely to occur unless 1) other means of equilibration towards a complete top-dog configuration have been tried, and 2) the culture has some prac-

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[104] Defined by Galtung as "a *structurally* based discrepancy between actual and potential states of somatic and mental well-being, it need not be perceived by its 'victims' or involve *physical* violence" (in Sandole 1993: 11).

[105] See also Schoorl (1974: 237-238).

[106] See also the remarks about land in the Introduction.

[107] See Ballentine and Sherman (2003a: 5): "there is little consensus as to how [economic factors] matter, how much they matter, or in what ways. In part, this disagreement has stemmed from the loaded normative connotations of the terms 'greed' and 'grievance'."

[108] The extremely violent struggle for diamonds in Sierra Leone (Richards 2001) or the Congo basin (Ross 2003) have a different start-up cause, but the continuation of the fights is due to the local abundance of this natural resource that is scarce and in worldwide demand and, thus, has a high economic value that can provide the warring parties with funds. These civil wars clearly illustrate Sandole's (1999) point of a difference between causes of start-up and of continuation of conflicts.

tice in violent aggression." (Galtung 1964: 116).

The frustration-aggression spiral seems to fuel itself by the mechanism that involved parties "tend to *overperceive* and *overreact* to threatened and actual assaults to needs" (Sandole 1993: 20). This underlines the role of emotions in violence genesis and development. Moreover, natural and social "environmental 'shocks' and uncertainties associated with developments at the international and global level" can exacerbate the "conflict-as-process" (id: 21).

As mentioned above, although most authors describe economic principles as driving forces, frustration can also develop with regard to basic needs in other life domains. Unfortunately, Sandole's list does not answer the question of which basic needs from all those listed by different scholars are the most basic, that is which needs are more important than others (Mitchel 1990) and demand means, that sacrifice everything else. The theories about the *relative* shortage of (basic) needs as a cause of violence indicate that, perhaps, the more meta-physical needs are indeed the most important and that Sandole was right to mention only them. Also other scholars from the conflict field discuss that people can bargain over (basic) needs, but that ideological or deep-rooted values can give rise to unsolvable disparities (Druckman 1993).

Ronen (1995: 41) distinguishes two different types of needs: in the psychic and in the physical sphere, sustaining respectively mental (e.g. pride, trust, love, sense of freedom) and physical (e.g. food, water, shelter) well-being. Compared to, e.g., Boserupian theory, one has to note that this adds not only several aspects in the physical domain besides the strictly food-centred one, but also a whole new domain. "The satisfaction of both sets of needs is necessary for human physical and psychic survival" (Ronen 1995: 41). What is interesting is the type of reaction in the case of frustration. Stone (1966) specifically mentions the strategies other than aggressive ones as ways of reaching a solution of the perceived backwardness. He stresses that sometimes a sequence (or even a mixture) of different ways of reacting exist.

Phases of conflict

According to Rubin *et al* (1994) reactions to a conflict can be ordered along a line of diminishing attention to other party's interests. The management of a conflict is more difficult when parties are more focussed on achieving their aspirations, when their aspirations are higher than usually and when they think another person's aspirations are less legitimate than their own. These circumstances can come about when "after a period of expanding achievements, there is a slowdown or reversal in this achievement" and when a person "develops the awareness that [the] other is of no greater merit than [himself], yet [the] other is afforded greater privilege" (id: 18-19). This is the same as the above-mentioned 'relative deprivation' feelings, but now also relative to others[110]. When there is a "status inconsistency" (when some people are higher on one criterion of merit-assessment than on another, but are assessed as being less high in status than a person with the reverse constitution), when parties both evaluate the existing power structures in their favour and when norms "that dovetail the aspirations of potential opponents" become weakened (id: 19), a conflict will easily spill over into the next phase.

Rubin *et al* (1994) distinguish four possible strategies or phases with increasing negation of other party's interest: avoiding, yielding, problem-solving (compromise can be one of these), and contention. Yielding can be explained as first stating one's claims in the dispute, but with-

[109] See also Ukeje (2001) on the role of educated youths in rebellion in Nigeria.

[110] Jealousy plays a big role!

drawing as soon as the other party also makes a claim. Contention means that a party tries to "resolve a conflict on [its own] terms without regard to the interests [of the other]" (Rubin *et al* 1994: 28). The authors explain that each strategy can be "more or less vigorous" (id: 44) and played out in a more or less rational manner. In the case of contention, more vigorous means more intense and frequent violence, e.g. "shots instead of shouts" (id: 45).

Rational considerations of parties that fuel the process development of the conflict are based on thoughts about a person's own interests and aspirations and the perceptions of the adversary's interests and aspirations. In addition, the perceived feasibility of a chosen strategy, that is "the assessment of the effectiveness and the costs" (Rubin *et a*l 1994: 21) is just as important. Indeed, as has been pointed out, perceptions of the world in general and the actors' position in it, both absolutely and relatively when compared to others, as well as perceptions on possible livelihood strategies and the position of conflict and violence in society[111], play an important role. These perceptions are shaped by (as mentioned above in the ecological-sociological theories) the mutual interaction between the natural-physical environment and the social domain. Herein, but also in the strictly social field, personal characteristics and culture play an important role. Within the framework of post-colonial theory it is stressed that perceptions are also formed by internalised prejudices based on notions from 'foreign' power-holders about their subjects as well as about themselves via their subjects, and thus by power relations themselves[112]. The researcher should be aware of this. Besides this, acceptable explanations (or explanations given by acceptable persons) about the relative deprivation can lessen the frustration.

In addition, the idea of 'having excessively less than your neighbour' is connected to feelings of powerlessness. "The distribution of power constitutes a continuing problem for society" (Scimecca 1993: 215). Social insecurity may be countered by a better power position. A perceived low power position *vis-à-vis* the adverse party may influence the choice for yielding or even avoiding, but it may also trigger a strategic move towards violent contending in a latter stage. Sometimes such a powerless position with regard to the competing party may even engender conscious or frustration-fuelled actions against a third party (scapegoat). Thus, in this study power, disparities and the question of the legitimacy of power both with regard to the allocation of resources and the management of discords are regarded as influences on conflict development.

Trying to gain the more powerful position by force is a way of showing off one's own power. Safeguarding 'your' fish on your neighbour's territory, as the inhabitants of Padmangay did, is also a sign of power. "The ability to achieve one's own will in a situation of scarcity is what makes one powerful." (Sandole 1993: 12). Sometimes management power over a certain resource is sought via control of another natural resource. Then the conflict seems to be triggered by the scarcity of the first resource, but it is power over the whole complex that is at stake. In North Senegal, for example, conflicts between herders seem to be focused on the scarcity of water wells. However, it is the surrounding grasslands that make herders want to have exclusion-power over the wells (Juul 2002). At the same time, the control of the wells is politicised via "struggles over difference and belonging" (Juul 2002: 186), that mean that social identities related to 'autochthonous' or 'foreigner' have to be played out. "[R]ights to

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[111] See for example De Groot (1992); Laurent and Mathieu (1994); Kruijt (1994) and Jadallah (n.d.).

[112] Said (1978), Memmi (1959), Mufti and Shohat (1997).

resources often depend on social identity" (Juul and Lund 2002b: 249).

The mix of wanting to be a member of a managing committee[113] for the sake of power over the resource or for the sake of becoming a powerful member of society in general, can be seen in more cases of conflicts in which resources are involved. Thus, whether or not natural resources are a direct cause for conflict or only a pretext to enhance power-positions remains to be seen. However, it is certain that they do play a role in the struggle for and with power that is abound in society as a whole.

An actor's position in his community is also important in the distinction that has to be made, when looking at causes of the outbreak of violence, between "group aims" or "personal goals" (Ronen 1995: 31). The sum of several of the same individual goals or strong loyalty feelings within an otherwise formed group can lead to escalation of a conflict, whether or not over resources. The Social Identity Theory of Tajfel and Turner (1979) states that sometimes people identify themselves as members of a social group (i.e. the social identity[114]) and at other times as unique individuals (i.e. the personal identity), depending on the situation. "..We are, in some sense, the same, or *identical to the other people*. […]. When we say that we are the same, we mean that for some purposes we treat members of our group as being similar to ourselves in some relevant way. Social categorisation accentuates similarities within and differences between groups. To take the most extreme example, in some violent conflicts such as war, the members of the opposite group are treated as identical and completely different to the in-group" (Australian National University 2003: 1). This social level of identity[115] "is the level at which individuals tend to regard themselves as relatively interchangeable (in terms of perceptions and beliefs) with other people" (Turner 1982: 23). To achieve a positive social identity, it is necessary to view one's own group as somehow better than other groups. This is social competition.

Thus, strong group feelings can trigger the defence of group members' interests out of loyalty. Then, the strength of feelings of injustice and deprivation with regard to natural resources, but certainly also with regard to other social issues, or the perception of those feelings, define the choice of the strategy in the conflict. In the case of individual powerlessness, group strength can cause highly vigorous contending actions.

2.5 In summary

The central route of the whole cascade (within the VoE diagram) is an investment in natural capital, but with only one goal and (finally) executed with one means. As regards other options, at each step the actor can choose to invest in (or with) one of the other capitals of Bebbington or even in natural capital, but in another sense. Escape routes are thus found in investment in and capitalisation of produced, human, social or even natural capital, or in combinations thereof. Why, how and when actors choose for a certain investment is determined by 'influencing factors'. These can be categorised according to the four domains of De Groot and

[113] See in relation to a well-committee: Juul (2002).

[114] "Social identity = that part of an individuals self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel 1978: 35).

[115] According to the Self-categorization Theory, next to individual and social it is possible that more levels of identity exist. See Turner (1982); Turner *et al* (1987); Australian National University (2001).

Kamminga, being (implementable) options; autonomy; objectified motivations and interpretations(-frames). The different domains are all influenced by

- existing capitals, and the possibilities to use them
- micro and macro structures and institutions (part of which are culturally defined with power relations being especially important) and the possibilities to change them, which in itself depend on, among other things, the possession of relevant capitals.

In general, explanations of strategies are sought in rational calculations. However, the fact that humans are also emotional beings, gives rise to the possibility of causalities outside the ratio. The human necessity to fulfil ‘basic needs’ both in the physical and meta-physical sphere connects the rational calculation of strategies with the a-rationality of ‘biological predispositions’. Both before and during the conflict, influences on choices for certain actions differ per stage and have different effects per stage. In addition, underlying ‘structural’ patterns, both in the biological and in the social environment, can account for the reactions shown.

3

Methodology

3.1 Introduction

The research is positioned within the rich domain of research on distribution and management of resources in general, that is mostly economically directed. Here the range of resources is condensed into natural resources. Natural resources are entities of nature that serve different - mostly simultaneous - functions for human beings. These different functions can be related to human health, material wellbeing and immaterial wellbeing. As such, natural resources can be seen as economic resources, cultural resources or health-giving resources. They have functions that are directly connected with these three domains: for example when people gather leaves from a certain tree to use to alleviate diarrhoea, or when a community is proud of its steep hill-top and connects origin tales to it[1]. The relation between nature and its functions can also be an indirect one, when the natural resources serve to maintain (or are) support-systems for the three[2]. The central focus of the present study is whether or not a causal link exists between environmental scarcity (that is: a scarcity in natural resources) and violence, and the possibility to discern certain patterns in this connection or in the avoidance of the connection.

In order to study this complex, the *non-violent* reaction to scarcities such as the environmental one, should also be made clearer. Only studying situations in which both violence and environmental scarcity exist will lead to the conclusion that a combination of the two, indeed, exists (Levy 1995). However, such a combined existence need not automatically also be a causal linkage. It has to be stressed, though, that "[i]f the thesis could be proved false in the favourable case [*as could be the case when studying situations in which both variables exist, RN*], then it would most likely be false for intermediate cases." (Flyvbjerg 2001: 75-76). Nevertheless, to

[1] See Zwaal (2003).

[2] Apart from having these human serving functions, nature also has intrinsic values (see e.g. De Groot 1992).

avoid criticisms of the Levy type ("evident cases"), this research focuses on the turning point within the causal chain of environmental scarcity towards violence as marked out in Chapter 2.

That is why the focus of the research can be described as follows: Is there a causal link between environmental scarcity and violent outbreaks. Is it possible to discern patterns therein and how do people avoid the chain of actions that develop into violence when indeed environmental scarcity has been perceived? The latter means: what is the causal link between environmental scarcity and non-violence? In this research I am looking for patterns in both the direction to violence and in the diversion away from violence, that is the pre-violent moment of assertion of rights to the environment.

As can be seen in the research question, both environmental scarcities (in the actors perception and in reality) as well as social patterns of behaviour are the focus of this study. Thus, the *exact* status of the environment has to be established *during the research.*

However, to clarify the relationship between the two, it is specifically the practices and strategies[3] of people to overcome or prevent insecurities in general, and (growing) insecurities related to natural resources and resulting scarcities thereof in particular, that have to be identified and analysed. Thus, the principles that set these practices and strategies should be the focus of the study. For that reason I have chosen to use methodological tools that are rooted in sociological theories and that have proven to be useful for the study of the everyday life of actors. Besides using a method that allows me to combine both the desire to add to theory building as well as to more profound context-dependent insight, I have used methods for analysis that are actor oriented.

To avoid generating a study into too many variables, only one type of natural resource is chosen as an example, namely land. The natural resource of land is an economic resource when actors use it to maintain their material livelihoods. In a direct way, they use the land to gather products to eat - wild products or agricultural or pastoral products -, to clothe themselves and to build housing and shelters. Land is also an economic resource when it is used as an exchange object in economic transactions. The example above about the hilltop shows land as a cultural resource. As was explained in the Introduction, land can be the basis of a community's identity; can play a role in power relations, etc. Indirectly, land can serve as the bearer of other useful natural resources, such as minerals, waterholes, rivers, fish-canals or trees. Although land is a natural resource it is also, partly, man-made. Investments in physical infrastructure, for example, define the outlook and use-perspectives of land. All these different aspects play a role in perceptions of land-scarcity and therefore have to be studied.

The research methodology serves to answer the questions posed. Describing the methods used for both data gathering as well as analysis provides an insight into the course of the research and creates possibilities for later duplication of the research. Thus, in this chapter I will describe which approach I used and how I used it. I will discuss the research questions, the research strategy and the research implementation with regard to place, time, which data I gathered and how. At the end I will deal with specific difficulties that arose due to this type of research and how I tried to overcome them.

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[3] See Zoomers (2001a: 16): the difference between practices and strategies is related to, on the one hand, "a set of repeated and related activities conducted" over a short time-span and, on the other hand, systematic and conscious behaviour in a long-term development perspective.

3.2 Research questions

3.2.1 The main question

What are the key causalities in the linkages between environmental resource scarcity, the pre-violent assertion of rights to the environment and the (non-)avoidance of violence itself?

3.2.2 Questions for the research

The questions to be answered in this research reflect people's reactions in six different situations of a combination of natural resource scarcity and violence. Schematically Figure 3.1 describes the six situations in a Matrix. In reality, however, the six situations are not static throughout time or for a specific place. Scarcity of environmental resources differs from season to season and from year to year. It differs from user to user (within one user group (rich and poor persons for example, or women versus men) and between groups (pure pastoralists experience a scarcity of food during the dry season, when grass with which to feed their cattle is scarce while cultivators, on the other hand, have a reduced food supply in the wet season when last year's yields have already been consumed and the new harvest is not yet ripe[4]).

Figure 3.1 Scarcity versus violence Matrix

	no scarcity	scarcity
'no violence'	A	C
pre-violent ass. of rights	X	Y
violence	B	D

For each matrix field a research question can be formulated (I do not cover matrix field A, as that is of no importance here):

1 (field B) How does violence develop even when environmental scarcity is not prevalent?
2 (field C) How is violence avoided even when environmental scarcity exists?
3 (field D) How does violence develop under circumstances of environmental scarcity?

Matrix field X and Y are connected to questions such as:

4 Do people ascertain their rights to natural resources when there is no environmental scarcity (how and why) not refraining to violence?
5 Do people ascertain their rights to natural resources when there is environmental scarcity (how and why), while not (yet) resorting to violence?

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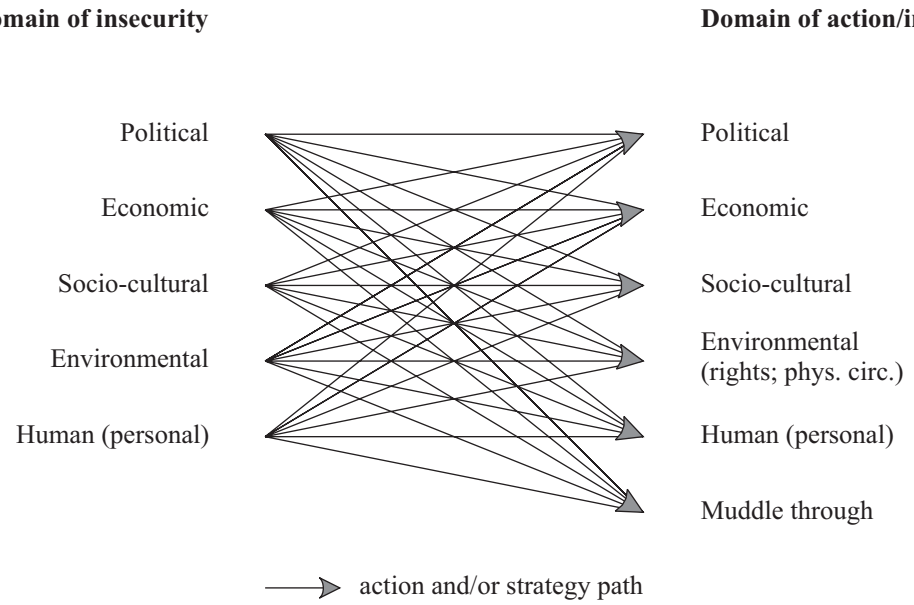
[4] See, e.g., Foeken (1990) and Foeken and Hartog (1990).

3.2.3 Sub-questions

The sub-questions are posed and formalised in the so-called protocols that the research methodology asks to draft (see below). People shape their lives based on perceived securities and insecurities. Insecurities can be defined as situations (in different domains) in which actors are exposed to changes in actual set-ups that will negatively affect their lives and that they perceive as not possible to influence. The different insecurities and the reactions to them can be categorised in specific domains as is described in Figure 3.2. The path of action can go from one domain to another, but mostly goes from an insecurity domain to several other domains. For example, political insecurity can be reacted upon by investments in both the political domain[5], the economic domain and the social domain, depending on what sort of possibilities the actor has and what (s)he deems effective. Most of the time, also somebody's insecurities are not limited to one domain. Thus, in practice, people's lives can be depicted as a complex of different insecurities with different reactions in different domains: The Insecurity Complex.

Figure 3.2 The Insecurity Complex



The protocols demand that information be gathered in the domains of the different insecurities people perceive and go through: their basic situations (point of departure, so to say, in all domains wherein the insecurities can spring up), their reactions to the insecurities, the structures, institutions etc. that influence these insecurities and the reactions, the historical setting and differences with the actual insecurities and reactions and so forth.

Because the study is intended to focus on the relationship between environmental scarcity

[5] Contrary to the categorisation of Political Capital within Social Capital (see chapter 2), here Political insecurity and investment in the political domain are depicted separately, in order to draw special attention to the meso and macro levels of this type of in(security) and to prevent a possible underestimation of these aspects which are so important for resource policies and distribution, as well as conflict management.

and (non-) violence, apart from an inventory of general insecurities, and even of environmental insecurities, more detailed attention should be paid to environmental scarcity as such. In the study this is defined as: a situation wherein there is a lack of a certain natural resource, such that not all persons who want to use it can do so. I chose this definition to incorporate emic views of scarcity because people's views and interpretations are the drivers of their actions. I also hope to avoid lengthy discussions between outside specialists on technical details, although I will describe as much of those details as possible to complete the picture with objective data to compare with the emic information. Sub-questions then fall into two types:

1 Those that ask information about the general situations of securities and insecurities.
2 Those that ask more detailed information about the environmental situation, the scarcity of natural resources and the specific reactions connected to that.

Type 1 questions are those that are survey-like regarding people's basic position in the different domains. That is those that lead to information on past and present rules and regulations regarding rights and conflict resolution and those that inquire about changes, etc. The second category of questions are about facts and perceptions on environmental degradation and scarcity, on perceived rights and possibilities as well as on perceptions, attitudes and implementation regarding violence, now and in the past.

3.3 Research strategy

An extensive survey of the literature on the linkage between environmental scarcity and violence proved that there were still doubts as to whether the connection between the two existed (see chapter 1 and 2). These doubts were even more profound with regard to insight into how such a link might develop in the field. Therefore, for this research, a methodology was chosen to help build theory in both directions. By enlarging the insight into the patterns of the causal link from environmental scarcity to violent or non-violent behaviour[6], more clarity might at the same time be offered on the question of the existence of the connection at all. To reach that goal, qualitative research methods are the most appropriate. Wester *et al* (2000: 16-17) describes the usefulness of qualitative research to test 'new' theories that are perhaps not yet fully developed and to explore analytical gaps. This coincides with the assertion of Eckstein (1975: 80), that "case studies are valuable at all stages of the theory-building process, but most valuable at that stage of theory-building where least value is generally attached to them. This is the stage at which candidate theories are tested"[7].

Wester *et al* (2000: 17) also highlight the serviceability of qualitative research when the researcher has a desire for detailed, 'natural' material; when (s)he is focusing on 'discovery'. Thus, for this research, the qualitative methodology and specifically the case-study is apt. Because "people act on the basis of the meanings [they attribute to] the objects [in their envi-

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[6] "[…] in cases [with environmental problems] where no significant violence is present […] ask "why not?" ..." (Levy 1995).

[7] "The case study is ideal for generalising using the type of test which Karl Popper called ' falsification' ". Then, "[i]f the thesis could be proved false in the favorable case, then it would most likely be false for intermediate cases." (Flyvbjerg 2001: 75).

ronment], that together form their world, the researcher should see the objects as the actors see them" (id: 21). Therefore "the research procedure should be as open as possible, [with a] direct contact with the real world" (id: 22). In order to achieve that goal, qualitative research is valuable because that type of research aims to look at certain phenomena in their natural surroundings and studies the processes in their full dynamics over time and space. Qualitative research of cases makes it possible to "deal with the full variety of evidence" (Yin 1984 in Upreti 2001: 29). It recognises the fact that different actors have different psychological and sociological 'settings', different options and motivations and thus different strategies to act on that which they perceive as their realities.

Unfortunately, the study of just one case, however deep the insights into the patterns within the case might be, does not easily allow for the addition of generalities to theory, although the case might be "strategically chosen and properly carried out" (George 1979: 53) to "add to the generalisibility of the case study" (Flyvbjerg 2001: 75). Giddens (1984: 328) highlighted the fact that "traditional small-scale community research […] can easily become [generalising studies] if carried out in some numbers, so that judgements of their typicality can justifiably be made". This is to say that, to make it easier to come up with generalisations, a comparison of a certain number of different cases should be made[8]. The fact that these case studies are in-depth and thus time-consuming means an excessive number would reduce the chance of reaching the goal. Just adding case studies for the sake of comparison and thereby decreasing the possibilities for an in-depth examination of each case in order to recognise controversies of the initial assumptions[9], will neither help to test the general insight in the theory, nor clarify the context-dependent factors and processes of the case situations themselves.

For that reason the method of "Structured Focussed Comparison" of Alexander George (1979) was chosen as a tool to use in the research. George's method consists of the design of a small number of "heuristic and plausibility probe case studies" (sometimes even as small a number as two) and the use of these as "building blocks for theory development" (id: 52).

Structured, focussed comparison works with structured protocols that operationalise the core concepts and relationships, through which strategically chosen cases are described and analysed, and by way of which a comparison of the cases and elaboration on the theory afterwards can be made possible. These protocols and the general questions to be asked for each case are formulated during the design of the study, in which phase the cases themselves are also selected. The research then seeks to identify the conditions under which distinctive types of causal patterns occur. Patterns of special interest are called 'foci'. These are extra tools to organise the study, connect it to theories and enhance the practicability. These foci will, therefore, feature both during the field study and during the analysis (see also Ch. 2: building of the model). At least two foci are going to be used:

- The degree to which actions can be interpreted as being part of a Boserupian or Malthusian process.
- Ethnic diversity or similarity.

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[8] Especially for Environmental Security Research this method is apt (see McNelis and Schweitzer 2001)

[9] In accordance with Popper's example of the falsification of an "all swans are white" theory, Flyvbjerg (2001: 77) declares that the case study is well suited to identify "black swans' because of its in-depth approach: what appears to be "white" often turns out on closer examination to be "black".

The methodology of 'structured focussed comparison' requires a relatively simple explanatory actor model. A model of 'broad rational choice' is used in this study, *i.e.* one in which cultural, social or moral elements may be incorporated but under an overall umbrella of decision-making by means of weighing the net merits of alternative courses of action. The model is known by the name "Action in Context". In De Groot (1992), for example, "AiC" describes the complex interactednes of specific things like 'deeper analysis', 'actor's field', 'world views' etc. that are useful to structure the analysis. It allows the researcher to explore the different factors and (other) actors that influence actors' decision-making. By doing so, the researcher takes the actor as the central agent and contextualises[10] outwards to explore the influencing ('secondary') actors and, even further outwards, those that influence ('tertiary') the influencing actors, etc. This allows the study of not only the actor and his livelihood in the local setting, but also of higher level institutions, power relations and dependencies. Substantively, the methodological framework of AiC will, in this study, be connected with (an exploration of) some of the better known theories and concepts from the 'conflict studies' field, as well as those on the interface of man and his environment[11].

3.4 Research Implementation

3.4.1 Selection of research area and cases

According to the methodology of structured focussed comparison, after the formulation of preliminary protocols, regions with a certain mutual resemblance with regard to the concepts formulated in the protocols, have to be chosen on behalf of in-depth study. In this study, four criteria were formulated for the cases to comply with (see below), meaning that the cases belong to one 'class'. A fifth criterion employed in the selection is that every case should differ as regards one or two of the variables of theoretical interest. These should, therefore, be cases belonging to the same class but differing from each other in certain important aspects.

The first criterion for making sure the cases belong to the same class was that the cases should be situated in one geographical region. Because Leiden University, in which institute this research is (also) based, has a field research station (CEDC[12]) in the Far North Province of Cameroon, this area seemed the most obvious choice to carry out the study. More than ten years of research have already been carried out there and a host of general information and for some regions even profound knowledge is easily accessible. There is a research infrastructure, offering possibilities for assistance, guidance and support from other (often Cameroonian) researchers. Moreover, the researcher's safety is enhanced thanks to the CEDC's excellent contacts with local, regional and national authorities. This Province has a high degree of environmental scarcity and there is widespread conflict, which is sometimes violent. On the other hand, compared to the Central African countries such as Chad and the Central African Republic, and some Western African countries (Liberia, Sierra Leone, Cote d' Ivoir), the overall situation is quite peaceful. In general, people handle their everyday disputes reasonably. This situation of

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[10] Based on Vayda's (1983) "progressive contextualisation".

[11] Like the study of livelihood strategies and decision making in rural areas and those that focus on the use and management of natural resources.

[12] *Centre d'Etude de l'Environnement et du Développement (CEDC)* in Maroua, Cameroon.

'normal' behaviour in which negotiations and diverting strategies dominate, but in which people nevertheless resort to (small scale) violence from time to time, offers a good climate to study the development of conflicts in both the violent and the non-violent directions.

With a view to choosing appropriate cases, I made an exploratory visit lasting 2.5 months to the Far North Province in the early year 2000, with the aim being to come up with a list of cases that meet the criteria formulated beforehand. The relevant criteria are incorporated in the research questions.

Because I chose only a certain amount of reaction to the existing conflict as a criterion, the use of violence could still be used as a dependent variable. This, as I explained above, is a response to the criticism of selecting "evident cases". On the other hand, I selected according to both environmental scarcity and conflict because "most likely cases" might help to falsify the (candidate) theory[13]. I wanted to make clear with my research that the supposed evidence might be shown not to be so evident because of the fact that a co-existence turned out to be just that, with no causal connection whatsoever. Thus, combinations C, D and Y of the research matrix (Fig. 3.1) are included. Cases of violent conflict or the pre-violent assertion of rights without environmental scarcity (B and X) are not specifically selected. However, they may turn out to be the case for some of the actors studied. Although the research results of the field station and a general overview of the region seems to indicate that environmental scarcity is all-around, differences in degradation and human pressure still exist. Therefore, it was possible to choose one of the cases so that, at the individual level at least, environmental scarcity may turn out not to be present when performing the in-depth study.

In short, the case selection was based on the presence of violence *and* environmental scarcity. However, the violence had to be of a limited scale, because large-scale violence always brings scarcity with it and then such cases would be too 'evident' in the eyes of the critics like Levy. The selection criterion 'environmental scarcity' was judged to be present on the basis of information of other researchers and own, albeit preliminary, observations. However, the choice was made such that the possibility remained open to see, during the in-depth research, examples of violence or pre-violent assertion of rights to the environment, without there being any scarcity (question 1 on page 51). Again, this served the possibility to show that, although a case seems evident (both violence and scarcity are prevalent), it is not. This is meant to be an answer to Levy and a warning to ES-scholars to check basic assumptions and not to take seeming scarcity for granted. The choice for moderate scarcity also served the possibility of studying different strategies of people differently positioned as regards the natural resources (this refers to all questions on page 50, but especially question 4 and 5).

Right from the start the usefulness of the field station was evident as it provided me with an experienced guide and interpreter for more then one language who was able to accompany me on my inventory tour. She had grown up in the culture of the Far North, but was also highly educated and had good access to, and was quite at ease with, officials, chiefs and local male villagers. The fact that she was a woman meant I was also able to talk without restriction to female inhabitants. In a four-wheel drive vehicle provided by the field station and together with a driver who was acquainted with the specific region, we travelled throughout the whole province from west to east and as far south as Mayo Oulo and as far north as Ngodeni on the northern border of Waza National Park (see Figure 3.3).

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[13] See Flyvbjerg (2001: 78-79).

Using suggestions from field station employees, key informants in local centres and formal and traditional authorities, both regional and local, combined with field visits c.q. site-seeings and on-the-spot group and individual interviews, I managed to obtain a list of several cases featuring both environmental scarcity and profound (sometimes even violent) conflict. The abundance of conflict over all sorts of natural resources, ranging from land, via water and fish to wood, made me narrow even further the class to which the cases should belong. I decided to focus on only land as a conflict issue. Why I chose land and no other natural resource is explained in chapters 1 and 2. Land as a bearer of other natural resources is included, but when these other resources as conflict sources can be differentiated from the land they are situated on, I decided to consider the conflict as not being a 'land conflict' and so I did not explore it any further. A clarifying example is the situation in which access to and the use of a waterhole in itself is disputed: "I dug it" and not the access over the land that leads to it, not the corridors on the land. Whether or not these conflicts were indeed due to scarcity of land was one of the things to sort out during the research. During this exploratory visit it became obvious that moments of competition and, thus, conflict over natural resources, and in particular land, did not occur throughout the whole year. I will come to this point when describing the time of the field visits.

As for the differing aspects between cases that George's method requires, these can be found in positions of contested boundaries (over or within formal borders), the domain of identity formation and ethnicity and the influence of the State and its servants. Thus, the focus on ethnic diversity and similarity is made explicit in the choice of the cases with regard to the differing aspects. On the other hand, the focus on the Malthus-Boserup divide can not influence the choice of the cases beforehand, but it is meant to enhance the similarity of investigation and analysis in all three cases.

With all this in mind I chose three different cases:

1. A case that seemed to be dealing with a conflict over a piece of land that is either grazing land or farm land within one, ethnically homogeneous village. Here the State is interfering with the installation of a pasture-forest reserve at the same spot. This case is described in chapter 6.
2. A case that seemed to be dealing with a conflict between different ethnicities, with different modes of using land and making a living: agriculturalists and nomadic cattle-keepers. The agriculturalists are expanding their settlements in the nomadic pasture area. This case is described in chapter 5.
3. A case that seemed to be dealing with a conflict over grazing land positioned at the border between two administrative districts. The two parties involved belonged to two communities of two different ethnicities. Both have lived in the area for quite a long time. One of the groups mainly comprises cattle-keepers, but who are also engaged in agriculture. The other party is mainly, and sometimes only, involved in agriculture. This case is described in chapter 7.

Case one is situated in the middle ranges of the Mandara Mountains along the border with Nigeria, on the high Mogodé plateau. This has been the home of the Kapsiki[14] for more than 500 years. For the exact geographical position see Figure 3.3: Dzambou.

[14] See, for example, Van Beek (1981).

Figure 3.3 *Areas of research*

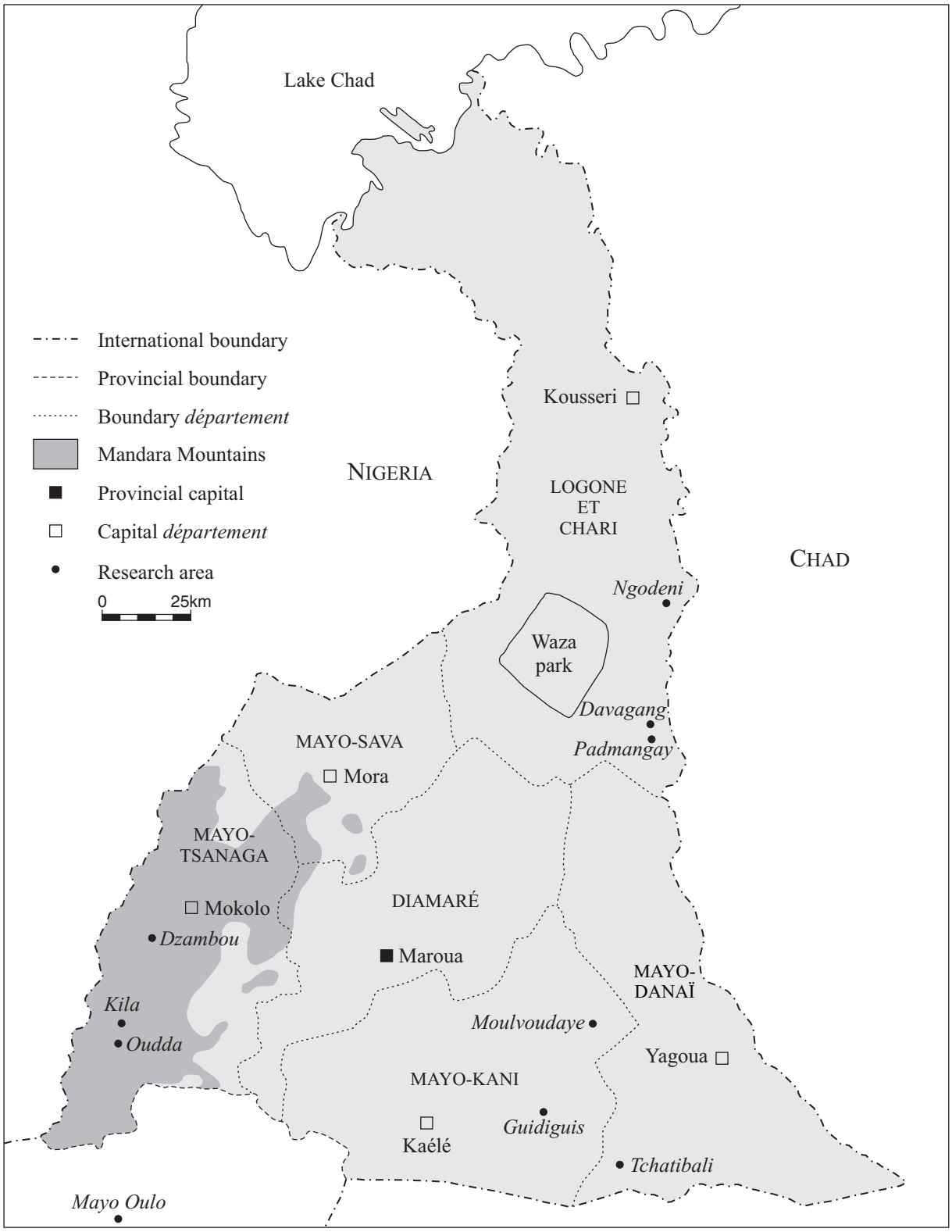

Figure 3.3 also shows the position of the other two cases. Case two can be found in the Diamaré plain, south of the provincial capital Maroua, in the triangle Mindif, Moulvoudaye, Guidiguis. The bush here serves as one of the last resorts for nomadic or transhumant cattle-keepers (several Fulbe groups as well as Choa Arabs) who, coming from their dry season grazing lands in

the Logone floodplain, need other grounds to graze their animals in the wet season.

The third case is situated in the southern Mandara Mountains, slightly further to the south than the first case (Fig. 3.3: Kila and Oudda). The two involved sub-departments are Mogodé in the north, and Bourha in the south. The two ethnic groups involved are agricultural Bana and cattle-keeping Fulbe.

3.4.2 Time of field research

In the period between mid-2000 and the beginning of 2003 the three case-studies were carried out during three different visits lasting three to four months each. Via continued contacts with local research assistants, the research periods were more or less extended. At the end of 2003 until the start of 2004, I have paid a short visit to all 6 places of research to try and gain a quick impression of important changes since my last stay.

The choice of the moment of study of each case was determined by three considerations. The first was, of course, that I wanted to be there the moment a conflict actually flared up (if at all). That would allow me to observe (and demand about and discuss) what the people were really doing, both in their daily lives as well as during incidents. Conflict over land in the Sahel and Sahel-Sudan zone is a seasonal phenomenon, most fierce during the onset and development of the growing season[15]. It is during that period that cultivators have to secure the ability to labour on fields for their next harvest. They feel this pressure all the more because, at that same time, the bottom of the granary becomes visible. The rainy season is the hunger period and at the same time the period that demands the most energy output: people are more tired and irritated due to a lack of food. Perhaps the sight of relaxing pastoralists adds to their frustration since as far as the pastoralists are concerned, the rainy season is a 'light' period during which fodder and water for their animals abound, milk production is high and there is no need to walk long distances, etc. Only the rain itself makes living out in camps a bit hard because it is wet and cold and people have to put up with muddy surroundings. Apart from the need for corridors from grazing area to grazing area that can be blocked by fields with growing crops, it is especially this latter aspect that makes pastoralists seek specific places to settle during the rainy period. In the dry period, after the harvest, agriculturalists do not use their fields. Cattle-keepers can make their cattle use whatever is left on the land and/or (finally) leave the area altogether. In short, this 'dead-season' is not an appropriate period to study conflicts over land.

On the other hand, trying to study people's actions and motivations during the agricultural season will be fraught with difficulties because, most probably, the investigator will not be able to persuade the cultivators to devote their precious time to talking with her (him). For that reason, the decision was taken to stay in the areas during the period after the rains had stopped, from the time at which the crops were still standing until after the harvest. In the second case (the new settlements) it was necessary to be around at the moment the cattle nomads arrived to occupy their rainy season camps. So, on this occasion, I arrived just before the onset of the rainy season and tried to meet the new settlers first while they were not yet fully occupied with their agricultural duties. Meanwhile I kept an eye on the weather and the movements into the area of the nomads. Unfortunately, the rains started very late in 2001, so I was obliged to leave with a lot of work undone. As a consequence, I instructed my guide and interpreter to continue the work as best as possible, without my direct supervision.

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[15] See, e.g., Van Driel (2001:154-160).

Having fulfilled these two requirements (namely being there at the moment of a possible conflict outbreak and at the moment that respondents can spend time on interviews), the third objective - that it had to be practically feasible to actually be on the spot – had already been met. At the end of the rainy season, for example, it would have been quite impossible to reach certain areas because of the big current of seasonal rivers and the fact that several places would be flooded.

Because in each case there was a precise moment during the year at which it was best to perform the field research, it was impossible to carry out the required tasks simultaneously. If you have to be present from October to January for all case studies, you can only do that in subsequent Octobers. This made an actual comparison between, for example, climatic or macro-economic influences more difficult.

3.4.3 Information gathered per case

Which data

As already explained in the section on the method of George (1979), the data collection was guided by protocols formulated before the area of the cases was visited and were then revised after the inventory, case-selecting visit. In general, these protocols deal with four categories of data, that connect with the five types of insecurities described in the Insecurity Complex, that were also noticed by Bebbington (1999) in his 'capitals' (the natural (or environmental), human, economic and social-cultural-political domain[16]) for which both independent and dependent variables were discerned. In addition, the research also featured intervening variables.

Table 3.1 Number of persons interviewed for survey

	Case 1		Case 2			Case 3	
place	Oudda	Kubadje	Origin places settlers [a]	Settlement	Bush-nomads	Dzambou	Baba Deli
Type of user	Agri-cultural	Cattle-keepers	Agricult. / cattlek.	Agri-cultural	Cattle-keepers	Agricult. / cattlek.	Agricult. / cattlek.
Number of persons	124	36	206	36	58	94	86
% of adult population	13	42	n.av.[b]	45	n.av.[c]	50	51
Number of women[d]	43	12	5	1	1	3	5
Total number per case	160			300		180	

[a] = four different origin locations were surveyed, of which the fourth is geographically spread out over the broader region around the settlements.

[b] = because a selection of origin locations was made and within those areas a random choice was made of persons for the survey-like interview, the total number of inhabitants of origin locations is not available.

[c] = the total number of bush nomads in the Mindif-Moulvoudaye region is difficult to establish and differs per

[16] See chapter 2 (as is explained, the concept of Cultural Capital is not used as such; Produced capital is incorporated in several of the other domains of the Insecurity Complex, especially in the economic one).

year and per month. The 58 respondents were chosen randomly in the sense that those we encountered in the bush and were willing to participate are part of the sample.

[d] = the number of 'surveyed' women is low and decreases during the research (for each subsequent case), because it appeared that the women provided more or less the same information as their husbands; several times they added information during the interview with their husband. Although I searched for female-headed households, I only located a few[17].

Although, in general, qualitative information was gathered, a certain amount of quantitative data had to be listed to aid the insight into the position of respondents, something the protocols also demanded. This concerned, for example, the age[18] and sex of the respondents, the number of household members, the number of cattle and other animals, the yields over a number of years - in short this means survey-like data. In addition to that, quantitative data were gathered to establish an insight into more objective environmental conditions. A good example of this is the rainfall patterns and numbers.

Of each party within the three cases, the survey-like study was carried out as a minimum with almost all inhabitants of the involved neighbourhoods. Moreover, the more in-depth research tried to involve as many persons as possible to facilitate a comparison between the different positions within the village and therefore within the conflict and differences in strategies and behaviour. Table 3.1 shows the number of persons interviewed (for survey-data) per case.

How was the data collected

Each case was studied during a period of residence with each of the two parties in the conflict. In practice, this basically meant six weeks per party. With regard to "comparative analysis" Cleuren (2001: 50) remarked that "data collection has to be swift and selective due to time constraints". Nevertheless I tried to examine the local cases in as much detail as possible. In the "new settlement" case (case 2) I also spent a number of weeks in the area from which the settlers came in order to assess push and pull factors. The periods of residence were spent as a guest in the house of one of the inhabitants of the affected village or neighbourhood. In some cases I lived in the house of the neighbourhood chief or one of his representatives, in some cases in the house of the person who also served as an interpreter and guide. This made it possible to observe from very nearby at least the daily lives of, and negotiations within, the household and the neighbours of one (extended) family per case.

The field-studies contained a mixture of a broad range of methods from different disciplines[19]. First, anthropological methods were used such as participatory observation, participatory mapping, semi-structured and open interviews of individuals and groups, ranking methods, and registration of life histories or other relevant narratives. In addition, observational techniques of the social geographical science discipline were employed concerning (among other things) spatial patterns of use and settlement, the position of natural resources and territorial boundaries, the position of the local map within the broader, regional map as well as the registration of the history of all this. Apart from the consultation of published maps - most of

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[17] I talked with women more profoundly during unofficial interviews and group discussions.

[18] Considering the influence of age not only on lifecycle and possibilities of livelihood strategies, but also on behaviour during conflict (see, e.g. Obi (1999); Richards (1996)).

[19] As is recommended by Livelihood Research authors (see e.g. Murray 2001: 14).

them dating back a long time[20]-, roaming the region, transect walking, following special area boundaries and climbing up to regional high points to survey the area turned out to be very helpful.

Information was checked and double-checked with local informants and with regional administrative civil servants and their dossiers or, if possible, NGOs working in the study area. It proved to be very difficult to obtain more official (census) data. Provincial and district agricultural and veterinary services were willing to deliver, but could only come up with limited archival information. Moreover, with regard to reported conflicts, the authorities involved, ranging from the police and district chief to the departmental court of justice, could not (or would not) provide me with even an overview of incidents that had occurred during recent years, let alone information on the causes that made people seek assistance from these authorities, or the narratives that should accompany each report[21].

Reproduction of the findings

To make a comparison of the three cases easier, the description of the data of the three case studies (chapter 5, 6 and 7) follows a strict format. This is based, again, on the protocols of data gathering, the insecurity domains and the related capitals as described by Bebbington (1999). Thus, each of the case chapters starts with an introductory piece, followed by a historical overview. Each chapter first deals with the 'invading' groups, with their insecurities, investments and claims. The focus then switches to the counter group and lastly the conflict itself.

In the insecurity part I start with the environmental domain. In order to acquire an insight into this type of insecurity I use five indicators on both the aggregate (village) level as well as the individual level where relevant:

1 the physical basis,
2 population density,
3 land availability,
4 commoditisation of land and
5 caloric needs and production (non-agricultural calories included).

The human domain insecurities can cover a very broad and diverse set of aspects, but in this study I focus on two more obvious ones, namely health and education. Economic insecurities are divided into agricultural (crops and livestock) and non-agricultural ones, whether or not farm related. Cash and subsistence production, as well as on and off-farm activities are very interrelated and mixed. Percentages of effort dedicated to the one or the other differ per moment and depend (sometimes afterwards) on production circumstances from micro to macro. However, the collected data has been arranged as well as possible into the four categories and in the same way for each case.

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[20] For instance: *Carte de l'Afrique Centrale au 1 / 50 000 (Type Outre-Mer), 1965, Paris: Institut Géographique National; and, Map of Cameroon 1 / 200 000, reprint 1978 (Field-inspection and Photo-point control 1963-1964-1965), Yaoundé: Centre Géographique National, Ministère de l'Economie et du Plan.*

[21] When visiting regional courts, archives appeared to have been destroyed by mice and termites, official records of mounted cases were lost, etc. Regional authorities did not keep the records they were obliged to and even accused me of secretly checking them as regards the performance of their duties.

As regards the description of the social domain insecurities, a selection has been made of a far broader set of aspects. In the social domain, bonds between different (sub) groups as well as linkages from group to group and from one level of society to another - together with the related rules, norms and values - are important as regards making up for otherwise increasing insecurities. When normal variability in such relationships shows a downward trend and risks reaching the threshold of the break down of the social systems altogether, one can speak of a situation of insecurity in the social domain. These are, therefore, the facets described in the chapters.

Insecurities in the political area of the social domain concern insecurities connected to trust and representedness at higher levels. Secondly, they refer to whether or not these higher levels ensure proper governance of the area in the sense of general development efforts, support of local efforts and feasible conflict prevention measures. Last but not least, the political domain is also important as a conflict resolution institute, but this can also fuel conflicts. Therefore, both the general political position of the groups involved and conflict mediation systems are covered under the heading 'political insecurities'. Land allocation methods and general cultural settings and changes are two sub-sections of the broader social domain.

After the description of the different insecurities of the 'invading' group, the investments to counter these insecurities are ordered in more or less the same way. Investments in the environment aim to improve the quality and quantity of natural resources in general, of land in particular and to generate more possibilities for access to and use of those resources. The basic objective is to improve the fulfilment of needs, such as those for food and shelter, both now and the future. That means that, apart from investments in the land, direct investments in higher production can also be made. All these aspects are described in the sections on environmental investments.

Because drawing up an inventory and measuring the total social capital and investments therein demand more research time than was available on this occasion, only the most obvious indicators are given. Subsequent sub-sections describe some examples of development of social bonds and linkages as well as the rules and norms resulting from them in the family and clan, the political domain and the general cultural system of the groups.

The fourth section of each chapter, dedicated to the entry into the new niche, has the same outline as the earlier sections. The fifth section that deals with the claim is different per case because of the differences in the stories. Because the sixth section describes the counter-party, the strict format of the four domains and the indicators used per domain are reapplied here. However, insecurities and investments are dealt with more briefly and in a more integrated fashion so as only to show why the counter-party is motivated to (stick to the) use (of) the piece of land in question.

The last section of each case chapter deals with the ways the conflict is handled. In instances in which both parties claim that the region is theirs, or is to be used as they see fit, they have to arrange something to exclude the others or make sure they themselves can cohabituate with the other group. As is explained in the theory chapter, strategies in conflicts consist of a hierarchy of choosing more and more for one's own interests. This goes from yielding via problem solving (finding a way out to both parties' satisfaction) to contending. This last option can be implemented with persuasion or force, in different forms. Only by carrying out the activities that relate to the second of the contending strategies do actors arrive in the last box of the VoE diagram: Box 4, 'Violence' (Figure 2.1). All other strategies can be called

'escapes'. Of course, the actions of both parties are important. Sometimes (or perhaps most of the times) third parties are also important[22].

3.5 Problems

3.5.1 Language

Because of the orientation towards two different parties per case, speaking directly with the actors would have meant learning more than 5 or 6 languages. Speaking the language of the groups studied certainly has major advantages over the use of interpreters. "The way farmers express themselves reveals important aspects of their way of reasoning, their way of perceiving events, mechanisms and relationships" (Zuiderwijk 1998: 358). Translations almost always remain incomplete. They are often biased and regularly lead to misunderstandings. It is, of course, quite impossible to learn the required languages to a level that avoids all these setbacks and makes it possible to "'internalise' some of the basic elements of local modes of reasoning and perceiving things" (id) in the limited time available for a PhD research project.

The help of interpreters was therefore indispensable. For each residence area a key interpreter was hired from that same settlement. The interpreters were male because it turned out that only men had sufficient education combined with enough spare time to act as interpreters. These people also acted as guides in the region and village. Wherever possible a woman interpreter was hired for a couple of days to carry out interviews with women in the settlement. I told all interpreters to translate 'everything' 'always' and insisted on the fact that I myself wanted to decide whether anything was worthwhile. I also asked them to provide a translation that was as close as possible to the local language words, or my own words when translating in the other direction. This meant translating 'literally' and 'verbally'. When this led to confusion due to proverbial expressions and unfamiliar comparisons, I asked them to provide an explanation in terms that corresponded better to the known idiom. As I experienced on a number of occasions, I had to be attentive to questions about concepts the local language did not include because then the interpreter's given explanation could already incorporate the answer being sought.

3.5.2 Trust and viability

One of the major problems concerned the bias of the answers. The answers given were not those that the respondent thinks you as a researcher want to hear, as anthropologists warn each other about, but the answers (s)he wants you to hear. That is, the researcher is used as a strategic tool and is sometimes literally deployed to win the 'battle'. Once, after I had established the different perceptions of different groups on the 'real' position of a boundary, the regional chief manoeuvred me into our car and took me to the sub-department chief to explain his case and, of course, win this important civil servant over to act on his behalf. To enhance the reliability and validity of the research and to win the confidence of the villagers, I had to resort to different strategies and tricks.

Before I actually arrived for my stay, I made my plans known to the regional authorities and to the village and neighbourhood chiefs. As soon as I entered the villages (neighbourhoods) I

[22] See, e.g., Obi (1999) about the role of the State in the Ogoni conflict in Nigeria and in the Sudanese civil war.

made clear what my purpose was and that I also intended to spend time on 'the other side'. Mostly this was greeted with approval since it connected with the African tradition of talking things over, listening and relistening. I told people again and again I did not take sides and made this clear by my actions as well. When I found myself in situations on the ground in which I had to choose sides I only expressed some doubts regarding high-level authorities and, by doing so, showed my appreciation of the residents' own feelings and, as I perceived, gained their confidence.

Building enough trust to make it possible for respondents to express their doubts to me about a controversial issue and to explain to me what they thought would be appropriate action, was a difficult task. Stories about my presence and the reason why I was there travelled quicker then I myself did and in certain areas I had to counter-play the prejudices that had arisen as a result. In the Kapsiki village of Dzambou, people thought that I was there because I had actually bought the disputed area. It was me who had turned it into a pasture reserve in the first place, they said. This thought made some respondents very angry towards me and it took a lot of time and efforts to build up new confidence and trust. The fact that I posed rebellious questions helped ("why don't you go down to the pasture area and destroy the border poles?"), although I used those types of questions in the first place to trigger emotions and acquire more trustworthy answers with respect to the ideas about the controversial issue and the strategies to be used. I deliberately informed my interpreters on this subject and instructed them on how to act, how to pose the questions, how to explain my presence and, quite importantly, to inform me afterwards when they thought the respondent had given the wrong information (for example some persons even lied about the number of children they had, while the real answer was obvious to any observer). This meant I spent a lot of time on double-checking. To safeguard against feelings of uncertainty and doubts regarding my trustworthiness, I explained to every respondent that I would never use any names in any report[23]. To stress that, I only asked my guide, secretly, the name of a respondent once the interview had ended. Names were necessary to establish family and other social relations of respondents that could be of relevance for the chosen strategy. They were also necessary to connect interview data with information gathered during group sessions and 'get-togethers', such as evenings around the household fire, market visits and coincidental meetings '*en route*' and with field observations.

3.5.3 Researcher bias

Although I attempted to carry out the research from an emic perspective, outcomes are evidently more or less blurred by the etic points of view. For example, with regard to conflicts Warfield (1993: 176) has already mentioned that "culture provides an interpretational lens for the origins of conflict, […] confounds popular notions concerning the role of parties in conflict, the role of the so-called neutral, and the concept of neutrality". Thus, the cultural background of the researcher co-shapes the analysis. And not only the analysis, but even the data are influenced by the person, position and points of view of the researcher. Especially when the research focuses on vulnerable information such as conflict behaviour, the accessibility thereof depends heavily on the behaviour of the researcher and how (s)he manages to obtain a sort of neutral and confident position, all of which is again culturally co-determined.

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[23] As regards the names that are mentioned in this book, I first obtained the unequivocal permission of the persons in question.

Because of these reflections, I will briefly describe those aspects of myself that may be relevant for the interpretation of the results. A very important point in the African context is the fact that I am a middle-aged woman and mother. As a result, I was looked at as someone to be respected and it gave starting points for discussions. I found it easy to intervene and provide assistance with family and household matters. This also generated non-intrusive opportunities to start conversations. On the other hand, I was not a purchasable 'girl' so men did not need to 'keep up' appearances, although jokes were made regularly to ease possible tensions. The fact that I am a Western-European (Dutch) woman also made me a kind of specialist as regards advice about health-related subjects and education. Although I did not tell people I am a veterinary surgeon, the fact that I was very interested in and used to cattle and other livestock could not be disguised. It opened up discussions with villagers and authorities alike. On the other hand, my own opinion about husbandry is not biased towards cattle prevalence over agriculture.

With regard to conflict and violence, I have to say that, having been raised in an upper middle class and a well educated environment I prefer discords to be settled on the basis of consensus and by argument rather than by force. This opinion is enhanced by my own culture and the fact that my country provides a clear and secure juridical system. I tend to speak out openly, without lying, even to persons with more authority (although respect should always be paid) and I prefer to experience such behaviour in others. In local situations, however, I always kept a bit of a distance from others and did not show what was really going through my mind. At a subconscious level I value people more (and their information) who do not show cruelty (for example against children or animals) and/or who invest in communal goods (for example sharing time with villagers to teach them better agricultural practices, inform them about HIV risks, or who set up a mutual banking system), especially when this is done voluntarily. This entails the risk that I interpret and comment on information from different people with different sorts of prejudices. On the other hand, the fact that I was and am aware of this bias caused me to be more careful when evaluating all the responses (which had to be carried out in a more or less intuitive way).

4

General description

Although the three case studies are to be dealt with separately in different chapters, where a more extended description of both ecological, social, economic and political issues is given for the actors under study, a broader insight into the setting of the three cases is necessary to make it possible to compare local level insecurities with meso and macro level ones. Therefore, in this chapter, I first describe some characteristics of Cameroon as a country.

In the second part of this chapter I elaborate on the Far North Province, where the three case studies are located. I deal consecutively with the natural resources, some human capital indicators, the economic situation, the cultural and socio-political situation and the administrative set-up. Special emphasis is given to the legal trends, especially regarding natural resources and conflict resolution.

4.1 The Country

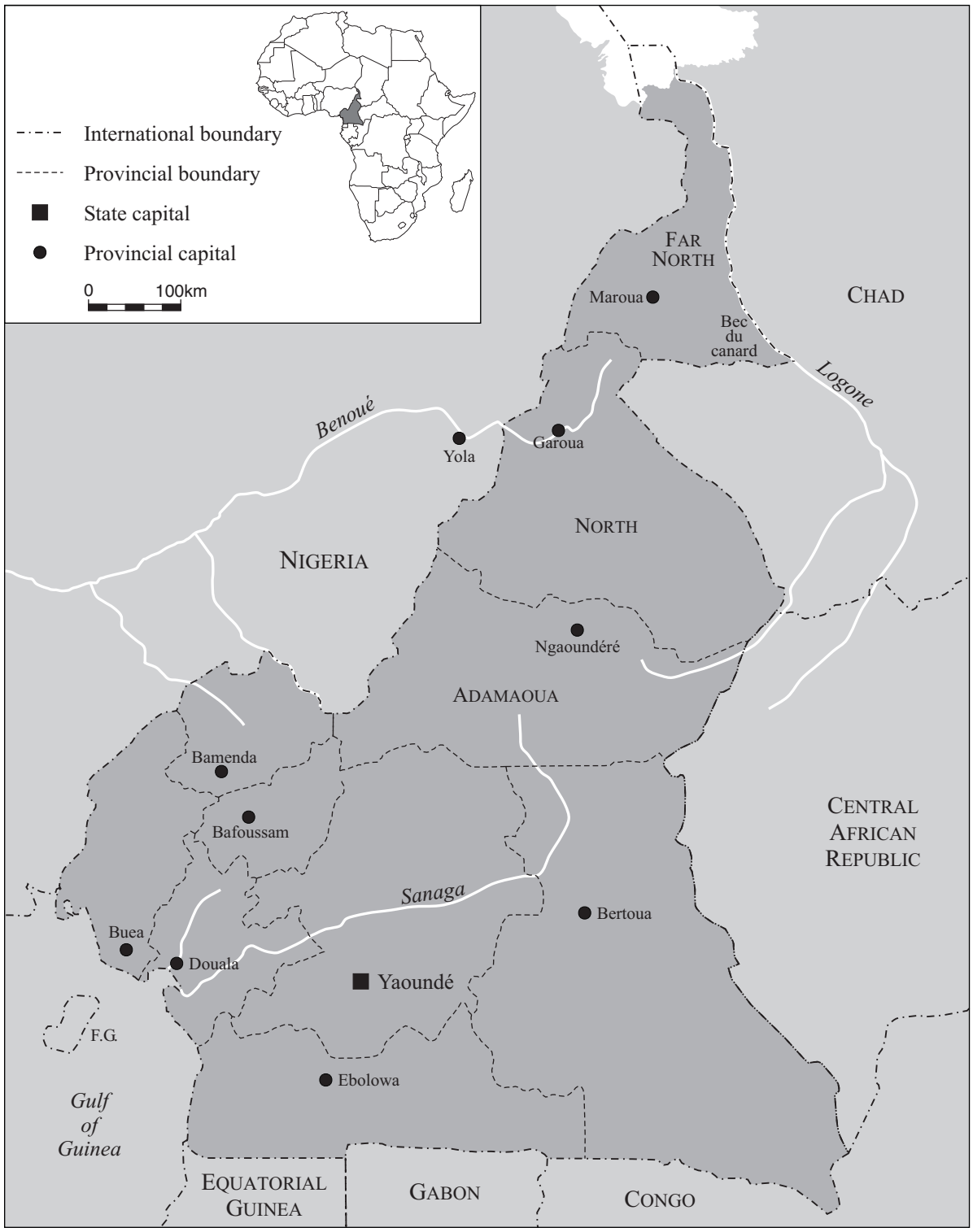
Situated in the armpit of Africa (Figure 4.1), Cameroon's roughly triangular shape, with a surface of 475,442 km^2, stretches over a distance of more than 1,500 km from the humid tropics in the south to the Sahelian Lake Chad in the north[1]. In between, a myriad of different ethnic groups inhabit a diversity of climate zones[2] and landscapes. Rich tropical rainforests extend to the south and east. Together with the oil fields, this is an interesting source to tap for the southern bound State elite[3]. In particular, the wealth of timber causes a predatory pre-occupation

[1] From 2° to 13° latitude.

[2] All four agro-climatic zones of Western Sub-Saharan Africa, described by Jahnke (1982: 17), can be found in Cameroon, although the real arid zone, with less than 500 mm of rain/yr forms only a small part of the Far North.

[3] For a recent report of the effects on the environment and the social conflicts engendered by the exploitation of the forest, see Nguiffo (1998, forthcoming). Furthermore, see e.g. Robin de Bois (1998); Cleuren (2001), World Bank Group (2003a).

Figure 4.1 *Cameroon*



with the south to the detriment of the north of the country[4]. This is also due to the export oriented plantations in the humid south where the very large number of growing days exceeds 270[5]. In the north-west and centre, extended grass-fields have gained in economic importance since they have been opened up for cattle grazing because of the eradication of vector borne diseases, especially Tripanosomiasis[6] (Boutrais 1999).

The total population is around 16 million people, who speak over 200 different languages. In none of the administrative units does one ethnic group have a majority status (Mback 2000:108). Although the country is officially bilingual, French is the *lingua franca* almost everywhere[7]. Only the two western provinces are officially 'English-speaking'. Nevertheless, in the Far North it is easier to communicate with 'Fulfulde', the language of the Fulbe, nomadic cattle keepers and the dominant group in the past[8].

Started as a Federal Republic in 1961, a year after the independence from the French- administration, the English and French Cameroon States have been united since 1972. Since 1984, it has been referred to as a Constitutional Republic headed by an elected president.

4.1.1 Political History

After the arrival of the Portuguese in 1472 and the subsequent development of the cross-Atlantic slave trade by first the Dutch and then the English and the French, the Germans became interested in 'the land of the shrimp'[9] in 1884. They invaded the hinterlands and conquered the different small kingdoms and 'non-headed' communities. In the south, after the cessation of military rule, "[a]t the local level power was exercised by German civilian administrators, by military authorities and, to a varying degree, by local chiefs" (Mbuagbaw *et al* 1987: 64). However, when the Germans arrived in the north at the beginning of the new century, after the defeat of the Fulbe, they chose to impose indirect rule because of the presence of the hierarchical system of Islamic kingdoms. The colonisers divided the territory into administrative units, each under the chieftaincy of an Islamic leader (Sultan or *Lamido*). With this the independence of certain non-Muslim groups, so hard-won from the aggressive Fulbe, was bluntly suppressed (Iyébi-Mandjek and Seignobos 2000a: 57).

When the French and British took over after World War I on the basis of the declaration of the League of Nations[10], the French used metropolitan legislation where possible. In addition, they superimposed 'neo-traditional' chiefs and rules based on what they considered to be

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4 In the run-up to the presidential election in 2004 several highly educated Northerners have accused the State President of neglecting the North and of under-representation of northerners in almost all (higher positions of) government, political and State bodies (see Eya 2003).

5 See, for example, the explanation of Van Driel (2001:8) or Jahnke (1982: 17) of the climatic zones of Western Sub-Saharan Africa.

6 This eradication came about through more and more widely accessible pesticides to combat flies (e.g. Tse-Tse) and ticks, and through bush clearances.

7 French is learned at school or on the streets of urban centres. School-attendance is low especially in the north, meaning that lots of (rural) people do not speak French.

8 Fulfulde words used in this book: *Lamido* (pl. *Lamibe*) = traditional Fulbe chief, now mostly district chief; *lawan* = village chief; *djaoro* = neighbourhood chief; *karal* = transplant-sorghum field; *muskuaari* = transplant-sorghum.

9 Camerões is the Portuguese word for 'shrimp', a creature found in abundance in the coastal waters here.

10 The League of Nations, formed after World War I, allocated the eastern part of the German Cameroon as a mandate territory to France and the western part to Britain.

native laws and customs[11]. Many new chiefs did not have a legitimate position because they lacked blood bonds with the former royal lines or because they were installed in communities where no chieftainship had ever existed (Mback 2000; Geschiere 1982). In the north the French followed the German example of incorporating the Muslim hierarchy and installing Fulbe chiefs to rule over formerly non-Muslim communities. With the official status in the French system accorded to them, several chiefs mis-used their power in the north as well, while the non- Muslim population remained powerless. Because it was difficult to dominate the scattered mountain people, efforts to force the inhabitants to descend to lower areas were undertaken already early in the French colonial period (Boutrais 1973; Van Andel 1998: 8).

As in other parts of the World, political parties emerged and started to demand independence directly after WW II. In the French part, in spite of a gradual increase of democratic liberties[12], a revolt in 1955 was put down with much bloodshed (Crawfurd 2003). Although it was followed in 1956 by general French legislation to increase self-government of overseas territory (Mbuagbwa *et al* 1987: 103), violence by the rebellious party continued until 1958, when the future President Ahmadou Ahidjo formed his '*Party l'Union Camerounaise'* and became the prime minister of the *Assembléé Legislative* (CAMLA)[13].

In January 1960, the northerner Ahidjo was inaugurated as first president of the independent Republic of Cameroon. A year later he succeeded in bringing the southern part of British Cameroon within one system[14]. In general, the power of 'big men' developed quickly in the Federation[15]. Although some suggestions from the Anglophone west were honoured, in general it was French Cameroon and its president Ahidjo who managed to "establish a preponderance of federal over state institutions" (Mbuagbaw *et al* 1987: 125), with emphasis on the inherited, centrally directed, French administrative and juridical system. In 1966, he introduced the one-party system. Manipulating personal power positions of 'co-leaders' within the party and within government, as well as the outcome of a referendum on the abolition of the Federation[16], he arrived at his final goal of a united Cameroon in 1972[17]. In 1982 he resigned from power in favour of the then prime minister Paul Biya.

Very soon Ahidjo seemed to regret his decreased power and, with the help of his northern, Muslim supporters, even tried to make Biya step down again. The southerner Biya started to exercise his power by dismissing several government ministers, and even accused Ahidjo of planning a *coup d'etat* in the middle of 1983[18]. In the presidential election of 1984, the sitting

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[11] See, for example, Geschiere (1993).

[12] In 1952, for instance, general male suffrage was introduced; See also note 13.

[13] CAMLA is the third of three assemblies set up by the French from 1946 onwards in a continuing process of democratisation. This last one is the result of universal suffrage in 1958. Its aim was to achieve independence.

[14] In a UN aided referendum the British Cameroons had the choice between joining Nigeria or Cameroon. The Southern part chose for Cameroon.

[15] See Bayart (1993) about "the politics of the belly".

[16] He claimed that 99.9 % of the votes said 'yes' to a six-line question statement, with a turnout at the election of more than 98 % in a country where the majority of the population is illiterate and lives far away from even small administrative centres. Especially in the Muslim North one can doubt whether women attended or gave an independent reaction.

[17] See, e.g., Chem-Langhëë (1995).

[18] Ahidjo indeed had called all northern politicians, both incumbent and otherwise, to his residence in an attempt to make a political statement. His supporters, however, argued that he should take precedence over the President. Finally this pressure made it necessary for him to retreat into exile where he tried to win the support of the French government . Cameroon sentenced him to death, but Biya later granted him amnesty.

president again managed to be re-elected with more than 99 % (*sic*) of the votes. However, the struggle for power was not yet over. When Biya tried to fire northern soldiers from the Presidential Guard, some of them rebelled and attempted to seize the presidential headquarters in Yaoundé. Thanks to loyalist troops, and to an Ahidjo-based anti-*coup* organisation of the military ranks that set the two main ethnic groups within the rebellious ranks (Fulbe and Tupuri[19]) in opposition to each other, the coup was thwarted (Le Vine 1986). But casualties were high and distrust spread. Up to today this is setting northerners and southerners more against each other than was already the case. As expected, Biya again took the opportunity to reshuffle his government to the detriment of what he thought were Ahidjo adherents and to replenish the ranks of the Guard with his own tribesmen (Beti)[20]. However, it did not help to re-establish trust between the two regions of the country.

It has to be stressed, though, that Biya had no intention of increasing regional, tribal or religious differences. He hammered home his message of "one Cameroon" and stressed that the rebels were "not from any particular province or religion" (Mbuagbaw *et al* 1987: 141). From the start, the Biya administration searched for alliances with the old traditional elite to safeguard stability, as did his predecessor and the German and French colonial powers in the north before that. However, the events made him look for new partners within the ranks of new educated elites. As a result, in the course of his presidency the government tried to diminish the power of traditional (Fulbe) leaders from the north (Schilder 1994: 223-8). However, Biya still tried to balance the influence of the different regions and to maintain national cohesion. He tried to achieve both goals at the same time "by appointment in the administration of members of *Kirdi*-groups[21] [from the north], and giving high positions in the North to civil servants from the South."(Van Est 1999: 8). Another method to make it possible to represent all ethnic groups was a high number of government places[22] and a high turn over of ministers (Bratton and Van der Walle 1998: 75).

Soon after Biya changed the name of the party to "*Rassemblement Démocratique des Peuples Camerounais* (RDPC) to show his distancing from the '*ancient régime'*, pro-democracy movements and protests started. Because political upheaval was developing all over Africa during those years (end of the 1980s-beginning of the 1990s), one is tempted to blame the economic crisis and the international situation on the end of the Cold War. However, comparative analysis of Bratton and Van der Walle (1998: 131 - 146) shows that, although the economic crisis that struck Africa from the mid 1980's onwards certainly did play a role in the development of political protests, it "cannot explain the extent, timing and outcome" of these protests (id: 132). Moreover, Cameroon managed to maintain a positive economic growth during this period (3.2 %). In addition, "international […] factors played supportive but essentially secondary roles." (id: 139). It was the growing frustration about regular participation possibilities (namely, 14 elections in 30 years) without any real choice, the subsequent denial of former political rights,

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[19] The fact that they started their attack together demonstrates something other than age-old controversies (see chapter 5).

[20] Le Vine (1986) states that the northern *coup* attempt gave Biya the excuse to change even more, and more quickly, the top ranks of government and other high strategic positions within the country.

[21] Here, Kirdi means 'non-Muslim people from the north". For a more elaborate explanation of this term : see the last section of this chapter, especially box 4.1.

[22] He even included some Muslim members of the elite in his cabinet team.

together with political diffusion from other countries[23] that led to protests. Like other Africans, Cameroonian voters exercised the "familiar urge to participate […], this time through non-electoral outlets such as strikes, riots, and demonstrations" (id: 143). Seeing the government turning from left to right and back again in response to donor demands, and not finding solutions to existing problems, made protesters challenge the legitimacy of the State leaders.

In the years to come, Biya followed a path of repressing and giving in alternately and changed tack from shooting on protesters[24] and imprisoning opposition leaders[25] to drafting a multi-party system and then committing electoral fraud[26]. He "encouraged party fragmentation by extending enticing provisions for state financing of registered political parties" and "[offering] individual leaders of the opposition […] various material inducements to cross over to the government side" (Bratton and Van der Walle 1998: 168). When the north established a Muslim-party, the UNDP[27], Biya responded out of fear for his former adversary by helping to establish a 'non-Muslim' party (the MDR[28]) that could divert votes away (Schilder 1994: 224). Indeed, in the 1997 elections, the totally split opposition had to recognise Biya again as the president, although large sections of the population expressed doubts as to the fairness of the process.

This doubt is fuelled by the fact that, in 1998 and 1999, Transparency International designated Cameroon as the most corrupt country in the world. One reason for this was the bad example the two successive presidents and their staff had given the civil servants. The second reason put forward, that of the terrible economic position at the beginning of the 1990s when civil servants had to resolve to bribery to earn a living, is somewhat farfetched. This may have been true for other African countries, were sometimes more than 90 % of salaries were not paid, but, thanks to French support, currency inflation rates stayed low[29] and the government managed to maintain a relatively low budget deficit (Bratton and Van der Walle 1998: 132). In Cameroon the government was 'only' not able to fulfil its responsibilities every now and again.

By giving way to more decentralisation and with the appointment of former 'ordinary' people to high-ranking State posts, together with the continued stressing of the fact that all citizens were equal and should be handled equally, Biya managed to win the support of people who, up to then, had had no opportunities. His rigid stance in the Nigerian border affair (especially concerning the Bakassi peninsula and the Bouram island in Lake Chad), although aggravating the country's defence budget, did much to ameliorate national feelings amongst the Cameroonians. This, together with the policy change in late 1996 - when the government upgraded the banking and fiscal system, adopted new land tenure and forestry laws to ameliorate production, and thus corrected its years of economic mismanagement - restored 'father' Biya[30] firmly within the neo-patrimonial system at the beginning of the new millennium.

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[23] That is, the example of protest in other (West African) countries might have been followed in Cameroon.

[24] Bratton and Van der Walle (1998: 166).

[25] Crawfurd (2003): for example the southern Social Democratic Front leader John Fru Ndi was arrested.

[26] Electoral manipulation and fraud was found by a US observation team.

[27] *Union Nationale pour la Démocratie et le Progrès.*

[28] *Mouvement Démocratique pour la Défense de la République.*

[29] For Cameroon it was 5.3 %, as opposed to more than 40 % in other African countries.

[30] Biya was often referred to in this manner during discussions and interviews with inhabitants of the Far North Province from 1999 – 2004 . According to Schatzberg (1986: 18) the metaphor of the president as a father derives "from an idealized vision of patterns of authority within the family" , based in the African lineage system. "… [T]hese metaphors are culturally relevant […] the legitimate governance in Cameroon […] is based on the tacit normative idea that government stands in the same relationship to its citizens that a father does to his

However, the first parliamentary and municipal elections of this new era were again subject to accusations of having been manipulated by the president's party. "Fifteen opposition parties filed complaints [...], and the country's Supreme Court annulled the results in nine districts" (Infoplease 2003). A second round only resulted in a further increase in RDPC seats: from an initial 133 to a final 149 out of 180[31]. In the lead-up to the next presidential election (end of 2004) many people are worrying about the disintegrative forces within the country, such as the growing identity consciousness related to ethnicity and region, the neo-patrimonialism and clientalism, the distortion of the participation of civil society and the endemic corruption[32].

4.1.2 Economic situation

Under the German colonial regime, Cameroonians experienced a period of relative economic prosperity. However, after World War One, both the French and the British mandate territory quickly declined. The only real income came from the plantations set up and later again owned by the Germans[33]. After World War II, however, the United Nations Charter "proclaimed that trusteeship was intended to promote the economic [and other] advancement of the local inhabitants" (Mbuagbaw *et al* 1987: 109) and "the period 1945 to 1960 was characterised by rapid economic and social development […] in both French and British Cameroon" (id: 104).

After independence, the Ahidjo regime opted for 'planned liberalism'. This means making efficient use of available resources by setting reasonable targets in successive five-year plans. In contrast to other West African countries private investment from internal and external enterprises was encouraged. The government focused most of its attention on the development of agriculture, but it also invested in industry to counter urban unemployment. In order to improve the future capabilities of the population, the Ahidjo administration paid due attention to education and health services. Infrastructure enhancement also became a government target.

Indeed, Cameroon in the years of the Ahidjo regime was "…one of Africa's economic success stories." (World Bank Group 2003a), "… that has in the past two decades followed an admirable and well-documented path of economic growth and development" (Ndongko 1986: 83). The discovery of oil in the late 1970s and the fact that petrol became an important source of income added enormously to the real economic growth rate of 8 % per year from 1976 to 1981[34].

The fall in world market prices for oil in 1984 had a significant impact on the country's income position[35]. This was aggravated by the simultaneous drop in price of the other export products. Cleuren (2001: 132) points out the devastating effects for the country's inhabitants: "Since the 1980s, living conditions have deteriorated dramatically for the majority of the population as a consequence of the severe economic crisis in relation to declining export revenues from oil, coffee, and cocoa." Of course this added to the unpopularity of the Biya administration.

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children" (id: 19). "Unfortunately", Schatzberg adds, "... manipulation and misapplication of the metaphors […] may well discredit, over the long term, a culturally valid basis for the organisation of legitimate political power."

[31] Electionworld (2002): of the specific northern parties only one obtained one seat in parliament.

[32] See, e.g., Konings and Nyamnjoh (2003), or Fonchingong (2004).

[33] During the early 1930s the colonial powers wanted to sell the plantations to private entrepreneurs, but the only people interested were the former German planters. At the start of WW II the plantations were again expropriated.

[34] Even Cameroon's debt position from 1977 to 1981 was the most promising on the African continent, being only 8% of the government budget.

[35] Hodgkinson (1996) in Van Andel (1998: 37): "By 1980, petroleum had become Cameroon's principal export commodity".

With a view to improving the country's financial position, international donors demanded structural adjustments (SAPs) to the economic and financial organisation of the country. Since 1989 "markets for agricultural products have been liberalised and a privatisation program for the public sector is slowly advancing. Ministries have been restructured and the number of public servants drastically reduced." (Cleuren 2001: 132). However, up to 1994, the World Bank Group (2003b) speaks of a fiscal crisis and economic mismanagement as well as reluctance within the government to "carry out necessary structural reforms." In combination with the political upheavals, the economic crisis led to a halt in the growth of the GDP between 1989 and 1993 and the GDP per capita fell steeply in 1994. In spite of the January 1994 devaluation of the Franc by 50%, which should have "restored the competitiveness of Cameroonian products" (Cleuren 2001: 133), the country's economic performance did not benefit[36] until 1996 onwards[37].

The international help to overcome the financial crisis led to an increase in the international debt from $ 2.5 billion in 1981 to $ 9.8 billion in 1998[38]. "In the fiscal year 1998-99, one third of the public budget was spent on debt repayment, while the total external debt represented 89 percent of the GDP" (Cleuren 2001: 133). Because this is "far above even the levels considered by the IMF/World Bank as sustainable" (Afrodad 2003), in October 2000 Cameroon was incorporated into the Heavily Indebted Poor Country initiative. In January 2001, to reward Cameroon's steady performance, the Paris Club agreed to reduce Cameroon's debt by $ 900 million, thereby reaching a total debt relief of $ 1,2 billion (nominal $ 2 billion)[39].

In the meantime adjustments continued. The restructuring of the banking system and privatisation of rail and air traffic were well under way by the year 2000. Despite the low oil prices the State finances improved. On a personal level, people's purchasing power continued to recover and the informal sector expanded. The Chad – Cameroon oil pipeline project, funded by the World Bank and the European Investment bank in 2000, is meant to improve the country's finances even further, although there is considerable protest against the risks for the environment and the local people[40]. In July 2003, the first oil flowed from the south of Chad to the coastal terminal at Kribi, Cameroon.

Countrywide, Cameroon can be regarded as almost self-sufficient with respect to food production, but on a regional scale there are substantial differences. Every now and again food-aid has to be given in vulnerable areas.

Politically and economically speaking, Cameroon is one of the most stable countries in West and Central Africa, but observers still warn about setbacks. Democracy is not fully developed: On the one hand, Biya has retained his position thanks to electoral fraud while, on the other hand, there are fears of the effects of a sudden death of the (old) president. Membership of political parties is not totally free, especially not for the elite and those with public management positions (e.g. chiefs). There is considerable pressure on people to

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[36] The sharp reduction in real income due to the devaluation of the Fcfa had negative impacts on the manufacturing and service sectors. Together with several delays of payments of civil servants' salaries, this made people seek additional sources of income.

[37] In 1996, growth rates returned to 5 % per year, due to a considerable extent, to services (OECD/AfDB 2002).

[38] See World Bank (2002) or Afrodad (2003).

[39] Several newspapers and internet pages discussed the Debt Service Relief initiative. The most important is the World Bank itself (2000), the Afrodad website (2003) and the OECD information on Cameroon (2002).

[40] See for example Nguiffo and Breitkopf (2001).

become members of the ruling party (RDPC) and this goes even as far as exclusion from certain jobs when such membership is not proven. Despite Biya's lip service to equal rights and opportunities for all Cameroonian citizens, his governance has led to a kind of regionalism. The French-speaking Christian south is more or less satisfied with 'their' Biya. The Anglophone west, though, feels betrayed and wants to go back to the Federal State or even to secession[41]. The north, however divided it may be, has a strong opinion about the origin of the next president. They believe he should again be a northerner, "otherwise our needs will never be addressed."[42]

Corruption is widespread both at government and administrative level as well as within the legislature and the judiciary[43]. Political turmoil can start any day. And the instability in neighbouring countries does not help. In addition, the economic recovery is a fragile one. Once again, oil revenues play an important role, but these are far from certain. Moreover, other income depends on exogenous influences such as a favourable rainfall pattern[44]. Unfortunately, import increases led, in 2002, to an external deficit. In addition, despite the debt relief, Cameroon still has to pay more in debt service than it receives in loans. In the meantime, urban unemployment is high and "half of Cameroon's population lives below the poverty line" (Courier 2002). In the Human Development Index of the UNDP of 2003 Cameroon ranks 142. Up to now, civil society has not played any role in controlling central institutions; the empowerment of the people remains feeble. "Sustainable development largely depends on the level of genuine involvement of civil society and on the country's political ability to curb corruption and promote good governance" (Courier 2002). In short, the overall political and economic situation is not totally secure.

4.1.3 Legal situation regarding land tenure and conflict resolution

In order to facilitate an analysis of land tenure situations at the local level, as well as conflict resolution in the event of discord, I will describe the national organisation of the two. The three case study chapters describe daily practices in more detail.

To start with, I would like to make a general remark concerning the land tenure arrangements: in spite of State law, there is no single land tenure regime in Cameroon. "It is a variety of pre-colonial (= traditional), colonial and national land codes" (Mope Simo 2002: 40). In addition, the customary or 'traditional' system is not as static and archaic as the term suggests[45]. It only means that "there are forms of land management based on customary principles" (Lavigne Delville 2000: 99)[46]. Different rules can be applied to each piece of land, at the same time or consecutively. Even the customary regime is not restricted everywhere to one system if different ethnic groups use the same area. In addition, sometimes the traditional customary rules are not clear because of the meddling of the colonial powers and because the

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41 See Konings and Nyamnjoh (2003).

42 Remarks to be heard in the streets and cafés everywhere in the North, from urban to rural places, during visits from 2000 - 2004.

43 In 1998 and 1999 Transparency International ranked Cameroon number one on its list of corrupt countries.

44 Apart from regular droughts in the North, in 2003, for example, the Southwest was hit by too much rain and flooding, because of which the harvests failed. Food aid had to be provided.

45 See also Djuidje (1999).

46 Some researchers prefer to speak of "socially-determined land-use rules" instead of 'customary' ones (Lavigne Delville 2000), Mathieu (1995)) to denote the flexibility and change thereof.

lengthy experience with State interference has made such traditional local practices "incorporate external concepts" (Lavigne Delville 2000: 102), albeit in accordance with customary practice (and thus, again, differently per group). This whole mixture makes different actors opportunistically claim the most appropriate 'traditional' or formal regimes. In other words, "land rights are being defined and legitimated at different levels in society, and transfer of land rights […] is regulated in ways that may ignore or challenge official land tenure regulations." (Van der Haar 2000: 272).

Development of land rights

In agricultural and settled communities, the pre-colonial system was mostly patrilinear, with patrilocal residence and patrilinear inheritance of natural resources. For women this meant that they could gain usufruct rights over land via their husbands[47], but they did not have management, exclusion or alienation rights (Ostrom and Schlager 1996[48]). The vertical dimension of land tenure differed per ethnic community[49]. This dimension means that "a hierarchy of groups is the focus of land rights, with each ascending group larger and embracing several groups of the next lower order, pyramiding toward a king or paramount chief of the tribe' (Bruce 1988: 26)[50]. Bruce (id: 27) adds that "mostly a group's land right does not originate at the very top of the political hierarchy, but at some [lower] level". In non-Islamic communities, the central chiefs were custodians of all natural resources and, as such, could reserve land for special goals (like hunting, prohibiting any encroachment), but their power to allocate land to inhabitants or immigrants was mostly limited to giving advice to neighbourhood heads who, in turn, only represented lineage and compound heads. In addition to those hierarchical societies, other ethnic groups only recognised power at household head level, with wise-men's councils for issues regarding the whole community (e.g. Geschiere 1982; Iyébi-Mandjek and Seignobos 2000a: 57).

As is the case in many other areas of Sub-Saharan Africa (see Perrot 2000; Breusers 1998), in Cameroon the personal dimension of land tenure was clear. The customary law of cultivators

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47 Of course in matrilinear societies it is different (see, e.g., Hilhorst (2000: 187), about Tanzania). In addition, Goheen (1989a: 372) for instance mentions the original possibility for married women in the Northwest province of Cameroon to acquire "rights of usufruct in lands belonging to their mother's lineage, or […] in lands of their father's lineage". A decrease in the availability of land, she says (id: 375), causes these rights to disappear.

48 "Management right = right to regulate internal use patterns and transform the resource by making improvements; Exclusion right = right to determine who will have an access right, and how that right may be transferred; Alienation right = right to sell or lease either or both of the above 'collective-choice' rights" (Ostrom and Schlager 1996: 131-132). Next to that, Ostrom and Schlager recognise 'operational level' rights, such as access and withdrawal rights.

49 Bruce (1988) defines four dimensions of land tenure: vertical, horizontal, historical and personal. Vertical refers to a hierarchy of 'secondary and primary right holders' (resp. primary and secondary actors). Horizontal refers to differences in type of land use and the rights related (whether or not in different times of the year, and with regard to resources that are situated on the land or otherwise related to the land; and rules for personal use or common use). Here again primary and secondary rights can be seen. Historical refers to changes of tenure systems over time, due to changes in land use practices, in population densities, in political systems, in climate and to conquests etc. Personal refers to "farmers views" (id: 29) and situations (endowments and entitlements: see Leach *et al* (1999: 232)) that influence the actual implementation of rules. The differences in opinion about rules make it a "give-and-take" (id: 29) game, as Berry (1988, 1993) also observed.

50 For example, women as a group get their land rights from the group 'married men' who, as such, get their rights from the fact that they are descendants of a certain fore-father (This touches upon the notion of Berry (1988) that tenure rights depend on social identity).

declared rights to land to the first settler. In lots of cases, elder sons of extended lineages migrated away (sometimes staying quite close in order to show that group membership is still important) to avoid havoc in a group that is too large, but more specifically to enlarge the lineage's domain in competition with other lineages. The extendedness of land surface combined with that of members of the group defined the status of the group (Gonnin 200; Loubamono-Bessacque 2000)[51]. Another reason to migrate was to enlarge the surface area in view of the survival of all current and future group members, "taking into account the equilibrium between the environment and the exploitation methods of the natural resources" (Koumba-Manfoumbi 2000: 63).

In the new area, the first settler and clearer of the bush became chief. Whether new arrivals were required to obtain the authorisation from the chief to clear and cultivate land depended on the customs of the group. Afterwards, the male settlers almost always became owners of their land, with all the rights that Ostrom and Schlager have formulated (see note 48). As regards their offspring these lands developed into lineage lands. Because chiefs aimed at acquiring large numbers of 'followers', partly to show off their importance to ethnically related lineages and partly to be safe from enemies (building a large army against them or geographically incorporating them), newcomers were often warmly welcomed (Gonnin 2000: 47). Individual family (household) heads delineated their fields using natural borders or erecting stone-lines or other signs. Most societies did not hold the land in common property, apart from some stretches to be used as grazing land or sacral land[52]. In most situations of land abundance, later immigrants had to be given parts of the already cleared land (in use), although according to custom these lands were inalienable because the property of offspring of former clearers[53].

Referring to Bruce's categorisation (see note 49), the vertical domain rights developed only gradually, so building up the historical domain. In the more ancient systems, individual household heads perhaps started as secondary right holders, when chiefs had to give them permission to settle, but afterwards they soon became primary right holders. Only when the community developed and/or became part of a wider system did higher levels of authority obtain 'earlier' rights (referring to primordial rights, such as those of first settler). Exo-intransmissability[54] grew in the customary systems in connection with the growing pressure on land (Van den Berg 1997: 178). Especially in the north, with its dry period, personal rights over land were only exercised during the agricultural season. In general, customary land tenure systems in Africa are fluid (Berry 1993), because they are subject to perpetual negotiations and changes.

Also, when land was abundant, inheritance was not a big issue. Although all villagers knew which land was the property of which lineage, everybody was able to use whatever s/he needed. This applied especially to male members of that lineage. Inheritance meant that each male member had the right of use of the land of his forefathers with decisions related to ownership being taken by the lineage elders. In general, every member of a village community had the right of access to and use of enough land to accommodate his or her subsistence. However, growing pressure meant that inheritance and allocation became important and sometimes even a cause of conflict within and between families. At such times, local chiefs and land masters

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[51] In a way this is still the case in official administration: the number of people and the expanse of the land are between "the principal determinants in the classification of chiefs under Decree No. 77/245 ..." (Fisiy 1992: 145). Also, the more of both, the higher the prestige of the chief.

[52] See also Mope Simo (2002); Bruce (1988).

[53] See, for example, Fisiy (1992: 128-129).

[54] That is: only the local chief is permitted to sell land, as a check against alienation of land to outsiders.

had to use their position as an arbiter in conflict resolution.

With the increase of colonial influence, land tenure rules changed in almost all four of Bruce's dimensions. Starting from a mismatch of ideas according to land ownership, from the 1880s onwards European civilians were able to buy land at very low prices from local chiefs, communities and individuals. For chiefs the sale of bush-land far from the village was a lucrative business that did not interfere much with the village system[55]. On the other hand, the former users still regarded their sold lands as free to be used (to collect firewood, to graze cattle or even to till) according to traditional customs. In addition to these ambiguous purchases, military expeditions also resulted in the conquest of land.

Although the customary practices did not make it possible to alienate land[56] and the Germans officially signed a treaty not to interfere with customary laws, in 1896[57] they formulated a policy that declared all 'unoccupied' territory to be vacant. 'Occupied' meant cultivated and this did not therefore include grazing lands, hunting lands, or fallow lands whose fertility was being re-established during years of non-use. In addition to that, and to encourage plantation agriculture, they stipulated that land had to be registered[58]. If not, it became land controlled by the State, or "crown land". The State then set aside small reserves on behalf of individual farmers for subsistence agriculture and living[59]. With regard to other natural resources, the first Imperial Forest Ordinance of 1900 prohibited the illegal felling of timber without replanting, or the use of forest products without individual exploitation rights (Egbe 2002). When all natural resources had thus been placed under the control of the colonial administration, the regular supply of resources to the metropolis was secured to the detriment of the local people.

When the Germans arrived in the north in the second half of their colonial presence in Cameroon, they had to deal with the same customary rules within the local non-Islamic communities as could be found in the south, albeit with small diversions. However, because they kept the Fulbe lords in place as their allies or even extended their realms to the detriment of the '*kirdi*' population[60], as will be further explained in section 2, the emphasis in the land tenure domain as well was placed on the hierarchical system of the Fulbe who had a firm grip on the legal system by way of their network of primary, secondary and tertiary chiefs. Land was allocated by, or in the name of, the primary chief who, in non-contested situations, delegated it to lower-level chiefs or even to customary (according to autochthonous, that is pre-Fulbe, populations) chiefs and their own original system. Indeed, as far as the cattle-keeping Fulbe were concerned, the authority of the *lamibe* was uncontested. In return for a reasonable tax payment, they were able to access grazing lands and acquire protection against enemies from their mas-

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55 The fact that these traditional chiefs were able to sell land contrasts with the perception of later Western colonial authorities and scientists that in traditional, communal tenure systems alienation was not possible. Yet, the sale of land meant something different than the Western buyers thought.

56 Although in the South chiefs did sell land to the Germans, within the framework of their vision and that of their subjects this did not alienate the land from them with regard to user rights.

57 In 1896, they had not yet invaded North Cameroon. This invasion took place in 1901.

58 The German land register was called 'Grünbuch'. This Grünbuch and the rules that called for registration can be seen as the forerunners of all later registration-based land laws in Cameroon.

59 Of course, there was widespread resistance to the entire policy, but the very small area appointed to farmers (only 6 ha was deemed enough per household head) particularly turned the population against the Germans.

60 Because of this neglect of the rights and the position of non-Muslim people, the Germans encountered continuing resistance up till WW I.

ters. On top of it all, the Germans imposed their laws regarding the use of natural resources and their central authority in the person of one governor with all-embracing power.

When the French and British took over, the registration of ownership (title) became the legal norm in both parts of Cameroon. The French expanded the German legal system to include the category of public domain. Land with regard to which individuals or communities could not prove were being used was considered to be 'empty', 'unoccupied' and 'ownerless'. Cultivation and temporary occupation were not seen as 'occupying'. For that, the land had to be developed, that is used for commercial agriculture, industry, housing, or be (re)planted with trees. This contradicted the customary system in which trees belong to other property regimes than the land on which they stand. Although confirmation of customary rights was officially possible for groups and individuals, "until the 1950s, land was registered only by European colonists and urban dwellers" (Van den Berg 1997: 189). As a consequence, most land became State land and from then on was administered by the colonial authorities as part of the national domain. Forests, as a potential economic asset, were given a special status consistent with the land law of 'non-developed land is State-land'. Indeed, the 1926 *Décret* classified all forests as '*forêts domaniales'* and put them under the control of the French Commissioner, who had the power to decide on exclusion, allocation and involved rules. Traditional users acquired user rights only to satisfy their direct (short-term) personal needs. Exploitation permits were issued to commercial harvesters, although several hardwood species could only be felled with special authorisation.

During the period of French rule, the State monopoly on forest increased, limiting the possibilities of local users more and more. Land legislation acquired its most restrictive form in the 1932 and 1938 Decrees that "prepared the ground for subsequent land colonisation by the colonial administration" (Fisiiy 1992: 35). However, after World War II, the French gradually started to meet people's demands. In reaction to successive protest actions of local chiefs and their villagers against the land-rights deprivation, the French revised the law in 1949. But it was only just before independence in 1959 that a new land law reinforced the property rights of local communities on 'vacant lands' by re-establishing customary land tenure via the authority of large customary chiefs[61]. However, immigrants' rights to clear land were not restored.

In the British Cameroon, on the other hand, native rights were recognised from the beginning in accordance with the League of Nations Mandate Agreement[62]. The British recognised so called "native lands": "the whole of the lands in (West) Cameroon, whether occupied or unoccupied" (Fisiiy 1992: 31), with the exception of the former German plantations, now called 'free estates' or 'Crown Lands'. However, "the Land and Native Rights Ordinance [of 1927] only acknowledged the right of occupancy, management and use of land" (Van den Berg 1997: 190). The ownership right of alienation, for example, was given to the Governor[63]. The

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[61] Whether or not those were indeed 'customary' remains an issue for debate. When Fulbe rules were re-installed, autochthonous populations still felt overrun. In lots of cases, equalising chieftainship with territory is a disputable colonial invention (Mback 2000).

[62] Mandate text: "In framing laws relating to the holding and transfer of land and natural resources, the administering authority shall take into consideration native laws and customs, and shall respect the rights and safeguard the interests, both present and future, of the native population. No native land or natural resource may be transferred, except between natives, save with previous consent of the competent authority" (in Fisiy 1992: 30).

[63] With the installation of these rules, the British did not divert far from the German system that also gave all-embracing power to their governor.

same principle was already formulated within the Forestry Ordinance of 1916 that gave him the power to constitute forest reserves, with special, more restricting rules[64]. In addition, native rights in customary fallow land were forfeited after ten years of "non-use". However, before that time had expired, "[t]he governor could deprive indigenous people of their rights to resource tenure only in accordance with customary law."(Egbe 2002: 63). In the case of free estates, both the State and, later, private owners had the right to purchase and sell on the basis of a Certificate of Occupancy.

After independence, the new Federal government wanted to build a 'modern State' with a mono-legal system of modern law and thus get rid of "old-fashioned" land tenure systems as had just been restored in French Cameroon in the 1959 laws. In addition, "land [has] a central place in the State's effort to "capture" and control local populations" and "for the rational allocation and reallocation of natural resources" (Fisiiy 1992: 1). So, to gain a firm grip on the population and on economic development, in 1963 the latest land laws were more or less reversed into those of 1932. The term "*terres vacantes et sans maître*" was substituted by the more positively sounding "*le patrimoine collectif national"*. However, this did not alleviate the problem of the new law disregarding the customary social and cultural values of land, and its function of social binding within and over the generations. All the rights regained by communities with regard to ownership, allocation and control over their own bush, pastures and fallow land, were again lost[65]. These communities could only exercise those rights over occupied and cultivated land (Fisiy 1992: 34). Once again, all non-registered land was to be administered by the State. Individuals had to prove that they 'developed' their already acquired land, to obtain property rights over it, via registration. In 1966, individual tenure became the 'winner' over corporate customary ownership. By comparison, in the Anglophone part and in spite of several amendments to Land and Forest Ordinances, there was not a great shift between the before and after independence situations with regard to natural resource tenure. This was mainly due to the rejection of all 'modernisation' plans.

Because the unification of 1972 asked for a streamlining of the differences in legal systems of the two Cameroons, a new land law was drawn up in 1974. This new system was firmly based on French colonial rule, as the powerful president of the Union came from the French part and overruled demands for recognition of their legal system from the Anglophone part. Ahidjo sought to enlarge State involvement on the one hand and privatisation on the other. The new laws meant citizens and communities could once more become private owners of their land[66]. However, the road to registration turned out to be a long, arduous and very expensive one, and one that was impassable for individual small-scale and mostly illiterate farmers. "Those who register are mainly bureaucrats, highly ranked civil servants, and traders, but no male, let alone female, farmers" (Van den Berg 1997: 192, note 22). Fisiiy (1992) found that, after seven years, the Land Consultative Boards had only managed to finish half of all applications (in West Cameroon the total number of applications was only 900; in the north this number was even lower) and, what is more, had only granted a title to 6 % thereof. The prob-

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[64] It has to be said that such an intervention could be exercised to prevent the destruction of forests "diminishing the water supply or threatening the continuous supply of forest produce to village communities." (Egbe 2002: 63). In other words, not only for commercial purposes.

[65] This reversion to the colonial laws of the beginning of the 20th century caused Lavigne Delville (2000: 102) use the denomination "archaic" for the so-called 'modern' laws.

[66] With, among other things, inheritance rights for their off-spring, and registered wife.

lem is that not registering means your land becomes national land and thus subject to expropriation. On the other hand, "nobody, not even the holder of a land certificate, can claim to be free from State encroachment" (Fisiiy 1992: 52) when, for example, the State deems it in the interest of the general public to do so. Registration, however, can also mean that the *user* can be expropriated, as the owner can now use his title for that purpose, whereas in the past customary habits and societal rules and solidarity had prohibited such actions[67]. Not only did individual farmers lose their ownership right once again but also the traditional communities: "The corporate nature of customary land rights cannot be legally enforced under the 1974 land law reforms" (Fisiiy 1992: 52). For example, "any sale or alienation of unregistered land by the customary community is illegal" (Fisiiy 1992: 52).

In the 1974 Land Law (Ordinance) and subsequent 1976 and other decrees and amendments[68], three types of land are stipulated, namely two types of registered land, being private or public and, third, non-registered 'common-pool' land, being 'national land'. Table 4.1.1 shows the different legal types of land.

Table 4.1.1 Legal types of land (based on Ordinance 74 -1, -2, -3 (1974) and Fisiy (1992: 38 - 53))

A. National land = land that is not registered (Art. 15 of Ordinance 74-1)		
	Land free of any effective occupation Land with houses, farming fields, plantations and grazing lands	
B. Registered land (may belong to private persons, private bodies or the State)		
Private estates	- Registered before 1974 (10 years to transform documents into 'modern' ones)	
	- New registration	- after purchase (has to be via a notary) - prove customary occupation of before 1974 (10 years time to register) - via concessions (with intention of development project and assessment after 5 years towards permanent grand (= private pro perty) or long-term (99 years) lease (for foreigners) ; to be paid for. - declassification of private State lands
	- State private property[69]	- acquired from National Lands (no compensation paid) - from private ownership by expropriation (compensation has to be paid) - from gifts (ordinary or testamentary) - recovering of public and parastatal land after institution has been wound up. To be used directly by the State(institutions) or to be redistributed to individuals in case of need ("in the general interest of the public")
Public estates		- all lands which by their nature or by their intended use are reser ved for the direct use of the public or public services, such as waterways and public paths[70].

[67] See also Van den Berg (1997: 192 – 194).

[68] 57 normative texts saw the light between 1974 and 1985 (Fisiiy 1992: 39).

[69] Private State land can be appropriated via three methods: 1) Sale or lease as with National Land; 2) Exchange between State and citizen; 3) Retrocede to a council, public body or parastatal.

[70] Cannot be privately appropriated.

Apart from the Land Laws as such, land and natural resource use and ownership are regulated in several other laws. The most important thereof is that which deals with forests, as it regulates the rights of access, use, management, exclusion and alienation of the land on which forest grows and of the natural resources wood (timber), fauna (wildlife) and minor products that together make up the forest. Indeed, the first forestry law of the United Republic of Cameroon, in 1973, dealt with timber (Egbe 2001: 8; Egbe 2002: 65) because of its economic importance. This ordinance gave customary rights of use, but only for the minor ('secondary') products. Naturally grown trees, even on private land, belonged to the State. So, only the State had all the rights of ownership as defined by Ostrom and Schlager (1996), of which management, exclusion and alienation are the most important here. Later amendments did not change this rights regime. In 1994, all forest resources and genetic resources that were deemed to be part of the national heritage were nationalised in accordance with the new Forestry Law[71], and thus not accessible to individual or community use. This included "orchards, agricultural plantations, fallow land, wooded land adjoining an agricultural farm, and pastoral and agro-forestry facilities" (Egbe 2002: 66).

On the other hand, in response to donor-stated conditions on Structural Adjustment Loans, the Cameroon government began to recognise the needs and rights of local communities[72]. The 1994 Forestry Act granted "local communities the possibility of greater control over forests and wildlife" (Egbe 2001: 1)[73]. Local council and privately planted forests were excluded from the nationalisation wave. Local populations were now allowed to cut trees in unprotected areas to meet their domestic demands for fuel wood and building materials, as long as they could justify these needs to officials from the Forestry Service[74]. Moreover, they were given the right to harvest wildlife and fisheries products for their personal use (not commercial), as long as the species and area involved are not protected and as long as 'traditional methods' are used, such as hunting tools made of plant material. In addition, community management is allowed on former fallow land and agricultural or pastoral land to which no title deeds exist[75]. Covenants between the State and community members can be drawn up to create 'Community Forests', which then have to be managed according to a mutually designed plan. The same applies to 'Community Hunting Zones', as formulated in the 1995 Wildlife Decree (see Egbe 2001, Bauer 2003: 22-23). Even the suspension of community rights in the public interest can officially only be implemented after consultation with the local communities and with appropriate compensation payments (Egbe 2002: 66).

Indemnities are also prescribed in the reverse situation where the State wants to create a

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[71] The law stated that 30 % of all Cameroon territory should be dedicated to permanent forest and this should represent the ecological diversity of the country (law 94/01 of 1994, Art. 22).

[72] In the course of the organisation of, and during, the UN conference on Sustainable Development in 1992, the level of recognition of indigenous peoples' rights steadily increased. Later, this developed within the framework of the negotiations and agreements on Biodiversity. At the start of the 1990s it meant that donor institutions began to ask their borrowers to fulfil related demands. As a result, global agencies began to claim rights to intervene in tenure rules.

[73] See also Didier (1998) and Mvondo (1998).

[74] "This provision is a source of confrontation between local inhabitants and forestry officials, as the mechanisms for proving 'justification' are unclear." (Egbe 2002: 66). It also opens up possibilities for more powerful forest-guards to accuse local inhabitants of misuse and to have them pay off the threatened fine.

[75] It has to be stressed that this rule includes the risk of depriving farmers of the use of the customary method to improve the soil quality through long-term fallow practices.

national forest on a territory that is already in use by local people (see Nguiffo 1994). Art. 26 of the 1994 Law on "Forests, Wildlife and Fisheries" obliges people to "respect the social environment of autochthonous populations" in such a case and, when it is necessary to limit or deny such "normal use", "compensation, according to modalities formulated in a decree" should be paid. Indirectly, this means that it is not per se necessary to limit or deny access to and use of, national forests by local inhabitants (Bauer 2003).

One of the problems with the new legislation is that, especially in the north with its long dry season, customary rules governing natural resources change over time. This can go as far as different communities having authority over a certain territory in different parts of the year[76]. As far as cultivators are concerned, rights of use and access to land are only claimed during the production season. In general, "land rights are always more complex then public versus private.'(Zoomers 2000 1 : 14).

In short, although operationalisation is fraught with lots of difficulties, - where concepts are not properly defined (for example, the term 'community' itself[77]), where the position of traditional chiefs is totally subordinated to other administrative levels (Mback 2000), where factual situations cannot meet formulated conditions (for example the unrealistic conditions for hunting rights[78]) or demands regarding places of community forest (Egbe 2002: 67), where routes to be followed to register community's rights are too difficult, time consuming and expensive (id) - the 1994 Forestry, Wildlife and Fisheries Act is a first step towards involving local communities and creating space for customary legislation in addition to the more formal rules. Nevertheless, the State remains the *de jure* owner of the resources and the Act goes only so far as to give communities some management rights.

In theory, the land registration laws give women more land-tenure security than customary rules[79]. Traditionally, almost all customary rules excluded women from land-ownership. They obtained access and use rights via male farmers, mostly husbands (these were therefore secondary rights)[80]. The death of such a husband made the woman vulnerable for expropriation by, for example, brothers or sons (of co-wives) of the deceased[81]. Because the registration rules required actual improvement of, and work on, the land, women stood a fair chance of obtaining ownership. However, for them, access to the difficult registration procedures was more difficult (and too expensive). Another option for women was the new law on matrimonial registration. A marriage certificate can also be used to secure the inheritance of the husband's property. However, most women were unaware of this possibility and, when they did find out about it, they discovered that it was still the husband's decision as to whether to register his marriage. This was, once again, a difficult route which cost money and generated no benefits for the husband[82]. In addition, trying to get official title had a detrimental effect on the woman's social position in the village, where the customary land ownership rules still considered a woman's

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[76] See Van Est (1999) about Kotoko management of fishing spots in the Logone area, or Van Driel (2001) about former management of the Niger valley.

[77] See Egbe 2001: 3-4.

[78] See Egbe 2001: 6.

[79] "Since 1974 Cameroon has adopted a land tenure regime that guarantees access to land ownership for everybody, included women and the very poor." (Anonymous, 2000: 30).

[80] See, e.g., Hilhorst (2000: 181).

[81] Insecurity may also arise when the relationship with the husband deteriorates, when a second (or other) wife enters the household, etc.

[82] See also Van den Berg (1997).

land title as a threat to family property and identity[83].

In practice, the increase of cash crop production and of husbandry for cash income made men seek more security to land at the detriment of access and usage possibilities for women. Even the arrival of foreign cattle keepers, agreed upon by local chiefs because it meant tax revenues, restricted women's farming options[84].

Conflict resolution

As depicted above, before the colonial period the different ethnic groups had their own rules to manage land and other resources. The same applies to conflicts about resources and other issues. For land-centred communities, the head of the land-owning lineage (that is the lineage that descends from the first settler on that piece of land) had to decide about land allocation issues and had to settle related disputes. Contesting members of the lineage who were unable to agree with the decision, "would generally break off from the main compound and migrate to foreign lands to create a new home, this new home constituted the nucleus of a new lineage…" (Fisiy 1992: 57). This could easily be done where population densities were low. In other locations, where there was a greater demand for land, war was often waged to decide which individuals (or group) could settle and take command. This seldom led to a continuing conflict, while the conquering lineage would restrict itself most of the time to the acquisition of just the political and economic control of the land, thereby leaving the "initial settlers to maintain the spiritual control" (Fisiy 1992: 59). However, when the warriors chose to "establish new links with the gods of the land", this resulted in "deep-seated distrust and hard feelings" (Fisiy 1992: 60), that were not easy to resolve.

Yet, within a community, conflicts could usually be settled not through mediation by the chief but by asking the gods of the land themselves to pass judgement. This involved libation of the disputed territory by the lineage heads[85]. Because the gods of the land were involved, the community did not have to support a kind of police force to impose implementation.

Incoming nomads usually obeyed the rules of the inhabitants of the territory on which they grazed their animals. In cases of discord with the population that had settled in the region they accepted the judgements of the local authorities, whom they considered to be 'masters of the land', or they simply went away.

Other types of conflicts, such as those concerning family matters (bride wealth (re-)payments, divorces, property inheritance - for example when the eldest sons did not divide the inheritance equally between their brothers – adultery), contract breaches between herders and cattle owners[86], or criminal offences (theft, murder, witchcraft), were judged by the village elders and the chiefs, depending on the cultural habits of the different groups. In extreme cases, land could be used in punitive acts. Confiscation (sometimes to transfer the land to the victim or his family), or even banishment from the entire territory of the group could be the outcome of the judgement. Otherwise, and especially in cattle-raising groups, the conveyance of animals might settle the discord.

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[83] As Toulmin and Quan (2000a: 27) already remarked: "it may be problematic trying to improve the security of women's rights of access to land without opening up a much broader discussion regarding the rights of women within society in general."

[84] See, e. g., Fisiy (1992: chapter 8).

[85] See Goheen (1989) and Fisiy (1992).

[86] See for example, Van der Ploeg (2001). See also the increase of this phenomenon in Benin (Van Driel 2001).

Most nomadic cattle keepers have strong lineages, with strong lineage heads. If the bush was large, it was free to be used as pasture. Conflicts would more likely to develop over the use of water sources (between and within groups) or, indeed, over family matters[87]. In such instances, lineage heads passed judgement, assisted where necessary by other elderly and wise group members (men). In cases in which some of the cattle keepers were settled and a 'royal' (or an administrative) hierarchy had developed, a local (*lawan*) or regional (*lamido* or sultan) leader was seen as the master of the land and he was required to resolve disputes over both land use and access to water between different groups or families of cattle nomads. These chiefs also had judging power (although this was often delegated to special judges at their courts) because of their role as religious leader within the Islamic system[88].

The power of the invading Fulbe and their hierarchical governing system went so far as to assign their leaders the arbiter role in discords between the 'new' and the 'old' people. In conflicting situations with cultivators, these same lords tended to approve the cattle keepers' actions. Thus, when the different customary systems clashed, the Fulbe system appeared to be dominant. In the areas where up until the German invasion the Fulbe had not been victorious, their system can only be called 'neo-traditional'[89].

When the colonial administration took over, "family matters were adjudicated according to customary law in *Tribunaux Coutumiers*, except for those educated people who explicitly renounced their customary status and wished to be treated as French *assimilés*" (Van den Berg 1997: 161). Conflicts over land between local users were still handled by the traditional authorities, despite the fact that overall re-establishment of customary land tenure via the authority of large customary chiefs was only carried out at the end of the colonial period (as we have seen above). In the British parts of Cameroon the customary courts already played a more important role in conflict settlement and land tenure arrangements in general.

From the colonial time onwards, State-claims to land or to the right to attribute land engendered conflicts between that State (or its representatives) and local communities and individuals. Just as in cases of conflict between inhabitants or communities, again the State tried to involve and take into account customary practices and rules to avoid excessive resistance. However, because all the power was generally vested in the State, and because the State had to take above-local level interests into account, most of the time the basis of State's decisions could not be challenged. "What could be challenged was the quantum of compensation paid by the public body

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87 Moritz (2003: 343-347) describes conflicts within Fulbe families over cattle. The fact that cattle were a common resource for Fulbe pastoralist families under the management of the 'family head', more or less regardless of ownership of the cattle, clashes with the Islamic inheritance (and private property) notions. For example, according to Islamic law, women have private ownership over inherited cattle, but in reality they cannot enforce such rights under the original Fulbe rules. Depending on the importance of the herd size for survival of the family versus the importance of adherence to religious rules and, thus, the piety of the group and the judges, a woman can try to get decision rights to her cattle.

88 See De Bruijn and Van Dijk (1995), or Moritz (2003).

89 Even where the Fulbe had been victorious, and had installed their law system, it was only superimposed on the local tradition of autochthonous people one century earlier. For some of those groups in the areas conquered by the Fulbe, the system found and nourished by the Germans (although called 'traditional' by them) was not really traditional, but fairly new being therefore 'neo-traditional'. In addition to that, it was also changed by the colonial powers adapting it to their own legal perceptions and views. See Olivier de Sardan in Lavigne Delville (2000: 99-100): "customary law was derived from the way the administration interpreted rights over land and people as described to them retrospectively by the chiefs at the beginning of the colonial occupation".

expropriating land" (Fisiy 1992: 145), not the expropriation as such. This is necessarily an administrative challenge instead of a juridical one, going from Prefect to Minister (see below).

In short, during colonisation, three different legal systems co-existed. Apart from the statutory law on land tenure and conflict resolution, popular customary law regulated daily land interactions. In between, the "State's customary law" could be involved. However, according to Fisiy (1992: 133), the latter was "out of tune with local practices" because it ignored the fact that customary law changes with the alteration of society[90]. "Some court pronouncements have not kept pace with socio-economic changes", such as the increase of market forces and the "emancipation of the individual from strict ties of kinship" (id: 131).

After independence, the focus quickly shifted to privatisation and the registration of land, and with that, State involvement increased again, also as regards conflict mediation. However, it became apparent that "ignoring […] local structures simply creates conflicts" (Fisiy 1992: 126). So, while land law was being created after unification, and even before this new law was officially enacted, the State had already installed a special institute to incorporate traditional leaders. This Land Consultative Board had to deal with the registration of land as such (see former section), but also with conflicts and ensuing disputes. Although the traditional chiefs constituted only a minority within the Board, they did have a large influence, because of their high legitimacy at the local level.

Since the unification, the State juridical system in the Republic of Cameroon has been organised according to the French system. The British Common Law system of the Anglophone part has more or less disappeared[91]. Conflicts are dealt with as in the French Code Civil, with more serious cases being subject to the French Code Penal. Based on the recognition that all different regions and ethnic groups have different land tenure and conflict resolution systems, the State has created space for customary courts at the unofficial, local level and installed *Tribunaux de Premier Instance* (Magistrate's courts) as the first level in the official judiciary system. These are located in the departmental capitals and mostly use regional customary law. In civil cases they are only competent when both parties in the conflict agree to submit disputes to such courts. A practical problem is the frequent linguistic difference between the parties and the Magistrate, together with the lack of well-trained (juridical) translators[92]. The parties that do not consent with the Magistrate's decision can go to a Court of Appeal in the provincial capital. Finally, the Supreme Court (*Tribunal de Grande Instance*) can check the decisions of lower-level courts. It has several chambers for both "legal and administrative matters as well as the appraisal of accounts" (Constitution of the Republic of Cameroon, 1996: art 38).

In cases that deal with penal justice such as theft, murder[93] or (e.g.) disturbance of enjoyment of land[94], the police have to bring charges at the Magistrate's Court, for example based

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90 See also Mathieu (1995) and Lavigne Delville (2000).

91 See Fonkah (1997).

92 In the summer of 2000, I witnessed a case of an accusation of witchcraft between two inhabitants of Sirlawé, at the Magistrate's Court in Yagoua in the extreme north of Cameroon, being postponed for days and in the end even for months, because no 'neutral' translator from French to Tupuri and *vice versa* was available.

93 In Cameroon, witchcraft has been officially declared non-existent, so accusations of witchcraft are difficult to handle. Nevertheless, most customary courts (dependent on the chief's attitude) and even some Magistrate's Courts deal with conflicts related to this matter. Geschiere (1997) even speaks of State interventions against the rising witchcraft activities designed to defend or to gain wealth and power: a judicial offensive to convict alleged witches.

94 In such cases, a registered title of land is unnecessary. Proven cultivation and use of the land is sufficient.

on accusations against civilians filed by (higher) members of the administration, based on accusations of civilians against each other or based on their own findings.

An example of how the Magistrate's court can include customary rules and practices in modern law is described by Van den Berg (1997: 241-242). In a case between a brother and sister over the ownership of a piece of land - both claiming the inheritance of it[95] - the Magistrate took into consideration the accounts of the family members as well as the village notables. These testimonies were quite contradictory, but the court chose to follow the explanation of the village elders that the land was given to the woman by her mother and that she planted trees on it. The development of the land by the woman (tree planting), in combination with the fact that the family involved was Islamic and thus that the woman had the right to inherit lands from her mother, made the Court decide in her favour[96]. Had the woman been a Christian or a follower of a traditional religion, the Court could not have given her ownership to the land.

As can be seen, the settling of land disputes is a difficult affair. It is even more difficult because the hierarchy of courts as depicted above does not exist in relation to land matters. Instead, the land law of 1974 "has come up with a hybrid group comprising bureaucrats and local authorities" (Fisiy 1992: 141). It has given[97] pre-eminence to the Land Consultative Board. Although this Board also has a role in land registration it is, as before the 1974 law, "empowered to settle disputes relating to the membership and boundaries of a community" (Egbe 2001: 4), as well as disputes relating to the registration and property of unregistered land (Law No. 19, 26 November 1983). As a result, it is an arbiter in its own decisions. During the registration procedure, appeals against decisions by the Board are "possible at the *Tribunal de 1re Instance* or the *préfet* (under *droit immobilier*)" (Van den Berg 1997: 317). However, such appeals are seldom implemented because recommendations concerning titling are not made public before they reach the Minister of Domains and only therefore once the decision has already been taken. Fisiy (1992: 141) also points out the fact that the Board cannot give "a well-motivated legal opinion on rights infringed in any of the land cases" (id: 141) because of its administrative instead of judicial background. In addition, because the position of the Board is purely advisory "the Minister alone has the final word" (id: 142). One can only appeal against a decision by the Minister "to the Administrative Chamber of the Supreme Court, which involves a highly complicated procedure for introducing litigation." (id). This is, understandably, an impossible course of action for local peasants.

Therefore, and because the Board officially has only authority to handle issues of land property (of registered land)[98], titling and registration, land disputes find their way to the civil courts via the formulation of land *use* rights, the infringement thereof and, specifically, the trespassing on somebody's land, although more often than not the latter is in fact also a dispute over ownership[99].

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[95] In fact, the case was subject to the penal code because the woman had accused her brother of infringing the peaceful enjoyment of the fruits of her land. A land ownership claim would have been dealt with by the administrative Land Consultative Board (see there).

[96] This case also shows that, within Islamic families, inheritance rights are not secure, and often clash with more customary rules (see also Moritz 2003).

[97] Re-enforced officially in an amendment of 1983 to the 1974 laws.

[98] Van den Berg (1997: 317) mentions the fact that the Mindif Land Consultative Board nevertheless handles conflicts over unregistered land.

[99] Indeed, conflict parties' opportunistic use of different formulations and denominations of the same conflict, so as to make it fall under the jurisdiction of either the Board or the Court, has engendered disputes between the two institutions itself.

Infringements of land use rights and trespassing can also be dealt with in Criminal Courts, depending on the access route of the complaining party. One of the issues that may be brought before one of the two courts is the use of fire. Fire sometimes leads to the destruction of standing crops and sometimes to the premature burning of grazing land. In addition to Civil and Criminal Courts (Magistrate Courts), Customary Courts are also competent to handle land conflicts. Thus, based on normative and cognitive awareness, financial capacities[100], manoeuvring skills and social relations, litigants can and do choose which forum will most serve their interests[101].

Even at a local level, different fora can be chosen due the overlapping administrative and political entities. Normally, local-level problems are first discussed by the persons involved and, if this does not solve the issue, with sub-local or local authorities[102]. Their role in conflict mediation is firmly embedded in customary law and habits and may therefore differ from locality to locality. On the other hand, their position in land and resource management and related conflict mediation is officially recognised in the new constitution of 1996 (art 55 - 57), with the appointment of Regional Councils, in which traditional chiefs and communities have to be represented, together with a description of its rights and duties.

Local authorities are not only village and neighbourhood chiefs which although unofficial are recognised by the State. Lots of ethnic groups have different 'masters' who have local authority over the use of natural resources[103], such as those related to land (who decide over the appropriation of land for new comers, for example, and therefore over conflicts over land and land boundaries between indigenous people and foreigners) and over social matters, that is conflicts about resource or non-resource issues. It depends on local coherence and social bonding as to whether these traditional institutions still have (enough) legitimacy to perform their conflict mediating tasks.

The fact that traditional and formal conflict mediating systems do not always coincide, and even contradict each other from time to time, is magnified by the competition of the different authority systems at local level. Nowadays, to solve their conflicts, litigants not only choose between traditional or statutory courts but, locally, between the involvement of the police, the traditional chief, the elected mayor or the heads of the regional administration or line agencies[104]. A 'wrong' choice, can lead to a negative outcome which favours the adversary or to lost court fees and bribe money without any solution having been reached. Arbiters can use the ambiguity of the system to perpetuate the conflict in their own favour. 'Solutions' can then give rise to more frustration and new problems in the future[105]. This is aggravated by the high level of corruption that influences the behaviour of chiefs, civil servants (like sub-prefects, line agents and police) and judges alike.

Nevertheless, "local customary laws […] provide the social legitimacy [for] interactions at

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[100] Court cases are expensive actions. So, "… just the threat of initiating a court action at the State level could serve as a strategic move during the dispute management process at the local level" (Fisiy 1992: 133).

[101] See also Von Benda Beckman and Von Benda Beckman (1994).

[102] So-called administrative authorities of 'second' or 'third' degree, who are customary chiefs.

[103] See Van Est (1999), Seignobos (2000b: 44), Iyébi-Mandjek and Seignobos (2000a: 57).

[104] See also Lavigne Delville (2000: 103): "The real problems arise […] from the multiplicity of arbitration authorities."

[105] Indeed, according to Mathieu (1995: 56): "the confusion and the non-application of land rules are not simply accidents or unfortunate imperfections" of conflicting law systems, but they are the conscious outcome of managed coexistence of different rules, by "those who have privileged access to political power and strategic information" (id).

the local level" (Fisiy 1992: 148). Only "when local norms are contested by the parties" (Fisiy 1992: 148), or when local norms collide, such as in cases where different cultural systems have to be applied to the same piece of land, does State law have to be resorted to as a last option. Whereas, in the past, that same piece of land and related conflict was managed perfectly by the system of one of the now conflicting cultural systems, it may take time before the different parties agree that State law can now offer a way out[106]. Changing societal patterns and the loss of legitimacy of the formerly overruling system are hard to accept for those who lose their primacy. The loss of status of several *lamido* courts in the north of Cameroon may serve as an example[107]. Of course, when the conflict extends beyond the local arena (for example in border conflicts between different districts or when authorities themselves are involved) higher-level authorities and statutory law have to be involved. For most of the local inhabitants, however, the involvement of State law and State Courts entails problems because they "do not have the financial or cognitive resources to seek redress under the 1974 land reforms" (id: 149). In addition, according to Fonkah (1997: 2) "Cameroonians do not have any confidence in the courts, because most of the decisions that come out of them depend on the whims and caprices of the judges."[108]

The fact that 'getting your rights' also depends on social position locally, but especially in the higher-level political forums, is demonstrated by the struggle for the pasture territory in the mountains of North-West Province between a rich rancher and M'bororo cattle herders who have been indigenous since the 17th century. To reach his goal, the rich business man, who is a prominent member of the ruling party, ordered the local administration to back him and used the gendarmes to arrest, detain and even torture M'bororo who resisted his attempts to deprive them from their lands. Without any government objections being forthcoming, he tried to frighten away his adversaries by stealing their animals and harassing their wives and daughters. Other tactics even include imprisonment without charge a M'bororo man who was filming a disputed piece of grazing land and trying him before a military tribunal[109]. Marginal ethnic groups and individuals are hardly able to defend their interests in such situations.

In the case of crop damage by livestock, the gap between local farmers and official courts is filled by the institutional installation by the State of the so-called Land Consultative Commissions. The frequent crop damage by roaming livestock (which in the past was handled by the parties involved with some assistance from neighbours or local chiefs) appeared to be developing into a growing source of severe conflicts. Now, for each case of discord over such damage, the Land Consultative Commission is called together by its president, the local subprefect. The rest of the members are the regional heads of the veterinary service, the agricultural service and the forestry service, the local police superintendent and the 'traditional' landchief[110]. The first two line agents in particular are easily accessible to peasants. The Commission has to descend to grassroots level and judge the amount of damage and the level

[106] Although State law does not offer a consistent, congruent system.

[107] See Moritz *et al* (2002) and Scholte *et al* (1999).

[108] For a comparable legal culture, see, e.g. about Honduras, Roquas (2000:178): "Latin American legal culture combines a great respect for formalities and rituals with a complete denial of the content of law". "Landholders […] have no confidence […] in the ability of courts to solve their problems [...], it only leaves them with an empty wallet" The avoidance of the judicial system results in "long, violent disputes that transcend generations." (id: 177).

[109] See information of Survival International (2002), Afrol News (2002, 2003) and Amnesty International Reports (1998, 2000).

[110] The *lamido* in the North of Cameroon; the *Fon* in North-West Province etc.

of culpability of the livestock owner. After that, it takes decisions on compensation payments. Officially, the parties can still go to court but, in reality, this hardly ever occurs. The Land Consultative Commission can also be called upon in cases of field or pasture damage by fire, cases in which cattle tracks are blocked by new fields or in cases of discords over access of livestock to public water wells. It is even consulted sometimes in cases of boundary disputes between neighbouring farmers.

Thus, conflict resolution normally starts at an interpersonal level. When this does not work, parties can (and do) choose from a myriad of possibilities of which the official route via the courts is but one. Due to "too few magistrates and judges" (Fonkah 1997: 3) and an excessively arbitrary way of decision-making, most inhabitants do not have much trust in this route. Combined with a shortage of (juridical) knowledge and the fact that court cases are expensive, the most accessible route is usually via traditional authorities or the administrative Board (or just some of its members).

4.2 Far North province

The (again) triangular shape of the Far North Province stretches over 350 km from the southern border with Chad to Lake Chad at the far northern edge of the country. From east to west it is situated between the Logone River that forms the Chad border and the escarpments of the Mandara Mountains along the Nigerian border. With a total surface of approximately 48,125 km^2 it constitutes 10 % of the total land surface of Cameroon (see Figure 4.1). Far North province is home to a wealth of ethnic groups[111], originating from three basic language groups[112]. It has the highest population density of the whole country (an average of 77 persons per km^2, and a total of 17 % of the national population). Some parts are even home to more than 250 inhabitants /km^2 (e.g. the northern Mandara Mountains), but other areas are without habitation (for example Waza National park)

At the same time, Far North Province is the most poverty-stricken area, with a poverty index well above that of the other provinces[113]. Infant mortality, for example, is as high as 200 per 1000, in contrast to 79.3 per 1000 for the country as a whole[114]. The general poverty incidence in the Far North is 56.3, as opposed to a countrywide poverty incidence of 38.7. This is partly due to the fact that the vast majority of the population are rural farmers, the poorest group in the whole country[115]. However, the farmers in the Far North are relatively poorer because of the low agricultural yields and the recurrent harvest failures there[116].

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[111] Boulet (1984: 115) mentions 42 different ethnic groups in the North of Cameroon (from the southern border of Waza National park to the Benoué river.) See also Meur and Felix (2001).

[112] At least seven language families are represented (between others: Semitic (Arab) and Chadic (e.g. Bana, Mafa, Giziga) from the Afro-Asiatic phylum; West-Atlantic (Fulfulde) and Adamawa-Oubangui, (e.g. Tupuri, Mundang) from the Niger-Congo Phylum, and Saharian from the Nilo-Saharian phylum (see Barreteau and Dieu (2000: 64)).

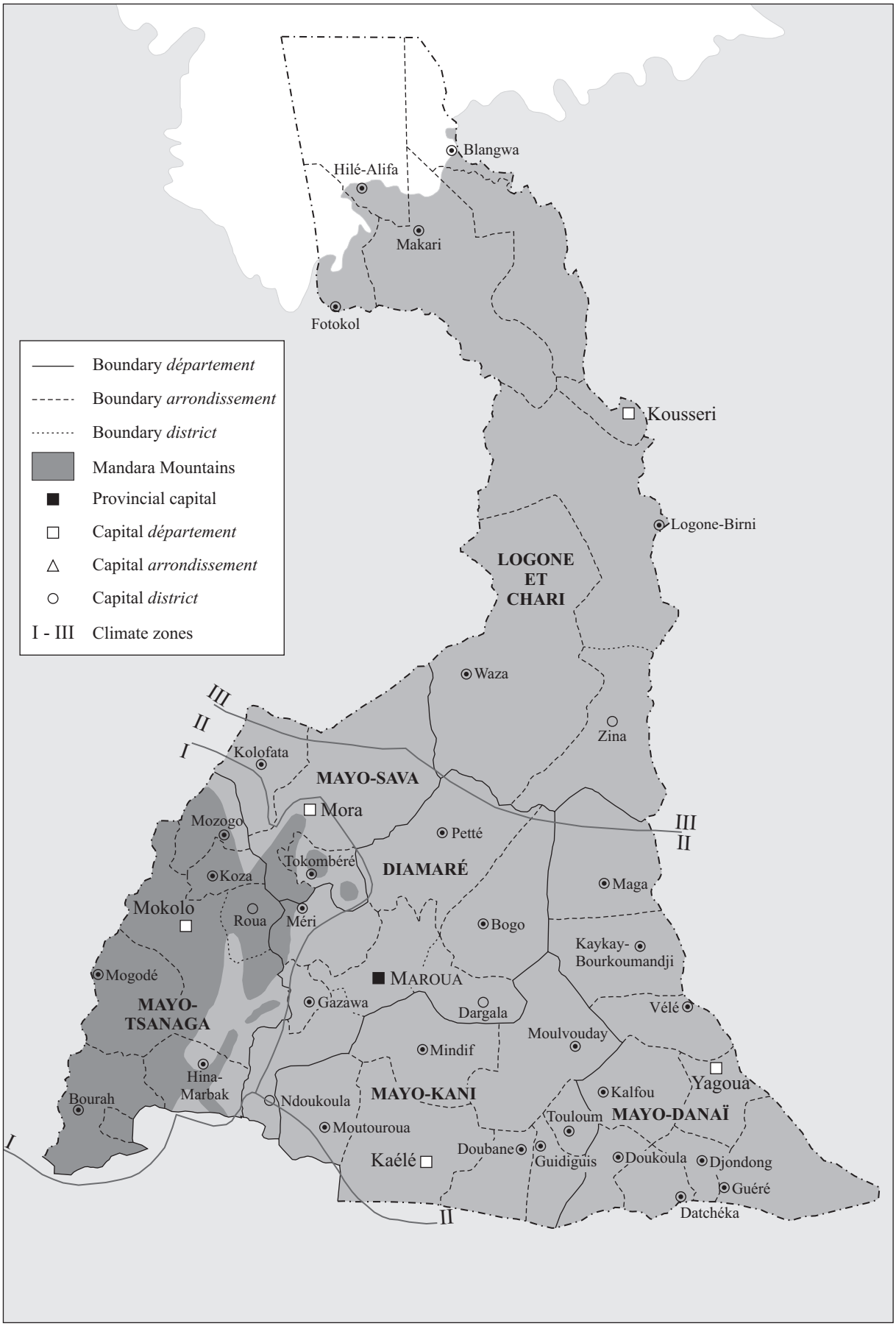
[113] http://www.wfp.org/country_brief/projects/608400e.pdf

[114] See OECD/AfDB (2002).

[115] Ministry of Economy and Finance (2002: 40).

[116] According to Njomaha (2004: 34) agricultural yields "have remained almost stagnant over some 30 years" and "the population growth rate in the region has remained higher than the staple food growth rate."

Figure 4.2 *Far North Province*



4.2.1 Environmental domain

Climate

For the inhabitants, both humans and animals, the most important climatic characteristics of the Sudano-Sahelian and Sudano Savannah environments[117] of the Far North are the two distinct seasons - the wet and the dry (of which the latter is divided into a 'cold' and a hot one, according to the inhabitants) - the amount and pattern of rainfall in the rainy season, the amount of solar radiation and the winds. These four together influence factors such as water availability, possibilities for plant growth, and soil erosion, not to mention general feelings of well-being and possible levels of activity.

The alternation of the two seasons is caused by the change of anticyclonic winds. In the dry season (December and January) the Intertropical Front moves southwards from the Sahara desert and brings the dry and often sand-bearing Harmattan winds. During June and July the anticyclonic wind blows from the Atlantic Ocean and brings moisture-bearing clouds and rain. The amount and distribution of rainfall over the days, months and years varies enormously, but the monsoon normally starts in the beginning of April and continues until the end of September or the beginning of October. The highest rainfall is recorded in August[118].

The Far North can be divided into three sub-climatic regions (see Figure 4.2) with diminishing mean yearly and monthly rainfall:

1. the Mandara Mountains (weather station in Mokolo at 795 m altitude),
2. the Diamaré (weather station in Maroua at 430 m), and
3. the extreme north (weather station in N'Djamena, Chad, at 295 m).

Due to the high altitude of the Mandara Mountains on the west border of the Far North Province, the sub-humid zone that stretches between the same latitudes from west to east all along the Sub-Saharan continent north of the equator[119] includes a lump northwards into the Far North Province. Although the rainfall may be relatively high, the Mandara Mountains suffer from the same unpredictability in rainfall patterns, over the years and within years, as the rest of the semi-arid north.

Towards the north and east, precipitation diminishes from 1100 mm per year in the south west Mandara Mountains, bordering the Benoué basin, to 400 mm per year above Lake Chad. Only in those most northern regions does the climate resemble that of Jahnke's "arid zone" (Jahnke 1982: 17). In general, in the whole Far North, the agro-climatic conditions are such that they can support both agriculture and husbandry, e.g. of grazing animals. In all three climatic areas, precipitation in the 1970-1990 period was lower than before, increased again in the first half of the 1990's[120] and then decreased again, albeit less dramatically than in the 1970's and 1980's (see Table 4.2.1). The latter can also be concluded on the basis of the

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[117] Semi-arid and sub-humid in the terminology of Jahnke (1982).

[118] It is claimed that the unpredictability of the amount and distribution of rainfall is increasing, while the total amount is diminishing, due to global climate change (see Obale-Ebanga 2001:25). Indeed, the last hundred years have seen one extreme long, more or less continuing, period of drought during the last quarter of the century (from 1970 to 1989), compared to only two short ones from 1910 - 1914 and from 1940 - 1944.

[119] See Van Driel (2001: 6) or Jahnke (1982: 17).

[120] Information based on Beauvillain (1995), and L'Hôte (2000).

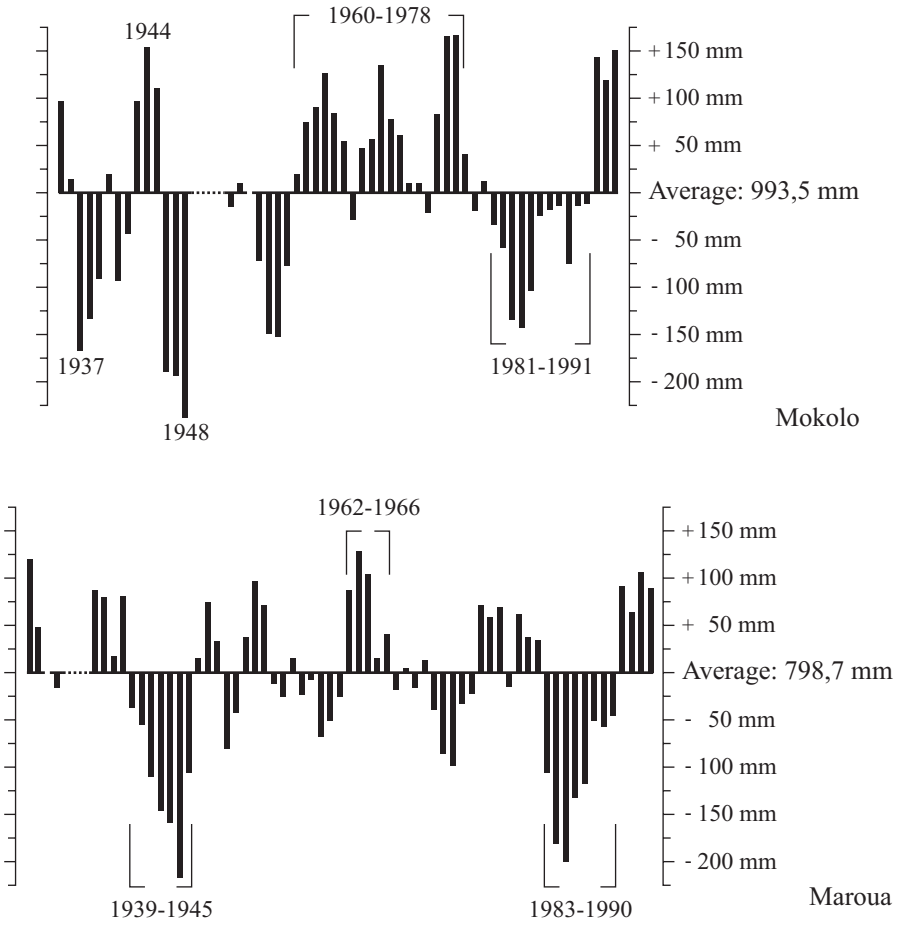
necessity of food aid to counter drought effects in 3 out of 5 years since 1995[121].

Table 4.2.1 *Mean year precipitation per period* (Beauvillain 1995; l'Hôte 2000; [a] = Qwikcast.com weather forecast). NB. 'n.av.' means 'not available.

	Mokolo	Maroua	Ndjamena
1944 - 1969	1035	810	620
1970 - 1990	1000	770	500
1991 - 1995	1119	980	4 out of 5 years > 'normally humid'
1995 - 2000[a]	n.av.	850	584

Long-term pluviometric data recorded in Mokolo (10° 44' N; 13° 49' E; 795 m altitude) and Maroua (10° 35' N; 14° 18' E; 402 m altitude) show in the advanced mean over 3 years a dry period from 1937 to 1947 and from 1980 to 1989. The period at the end of the 1950s also had a lower than long term mean precipitation, although it was less dramatic than the other two periods (see Figure 4.3).

Figure 4.3 *Advanced mean over 3 years in Mokolo and Maroua* (Beauvillain 1995: 72 and 74)



[121] See www.wfp.org/country_brief/projects/608400e.pdf, which deals with food aid in 1998 due to the shortage

The length of the rainy season is more or less the same in Maroua and Mokolo (5 months), but further north, where measurements were taken in N'Djamena, it lasts only 3 to 4 months. According to Njomaha (2004: 34), the duration of the rainy season has diminished[122] since the 1970s and this has threatened the maturing of the crops and has also made people abandon their long cycle crops. For a good cultivation season, at least four subsequent months of more than 100 mm of rain are said to be necessary.

Solar radiation depends on the seasonal variation and latitude. Of course, during the rainy season, clouds cover the sky for much of the day, thereby decreasing the amount of sunlight. In addition, the Harmattan winds bring a dry fog that absorbs radiation, sometimes from November until the end of March, but which is most prevalent in February. In total, both radiation and temperatures increase in line with the gradient towards the north. For example, in 1996 in N'Djamena there were 3150 hours of sunlight while, at the same time, there were only 2900 hours in Maroua. Year means of temperature decrease from N'Djamena via Maroua to Mokolo, mainly due to a rise in altitude there[123] (see Table 4.2.2). Evapo-transpiration also increases alongside solar radiation and temperature increases. The maximum mean monthly temperature is lowest in August and highest at the end of the dry season (April). The difference between the means of the hottest and coldest month in the whole province can be as much as 6.5 to 7° C. The lowest temperature is recorded during the nights in December-January, when there is little cloud. At that time, the difference between day and night temperature is also very high, especially further north (see Table 4.2.2). This makes living conditions difficult. For example, susceptibility to respiratory viruses increases.

Table 4.2.2 *Divers climatic parameters in the three climatic zones* (based on L'Hôte (2000), and Olivry (1986, 1996) in L'Hôte (2000)).

	Mokolo	Maroua	N'Djamena
Solar radiation (in hours)	n.av.	2900	3150
Mean year temperature (in ° C)	26	27.6	28
Max. mean monthly temp. (April; in ° C)	37	39	42
Min. mean monthly temp. (January; in ° C)	18	17	14
Mean daily temp. minus mean nightly temp. in January (in ° C)	12	16	20

Wind force can differ dramatically, especially during the rainy season. Construction damage and soil erosion by heavy winds occur especially just before and during downpours and thunderstorms.

Geology and Soils

Geologically speaking, the Far North Province can be divided into two parts which are north

of rain, locusts and grain-eating birds in 1997 and with food aid provided in 1999, due to an excessively late start to the rainy season, the effects of grain-eating birds and stray elephants in the Mindif area and caterpillars in the Mandara Mountains; www.cidi.org/disaster/01a/ix1202.html which deals with food aid provided in 2001 because of an excessively low precipitation in recent years ; and www.fao.org/docrep/1004 etc.

[122] This depends on the area: for example, the data of Beauvillain (1995) does not reveal this for Mokolo. In Maroua a diminishing trend can be observed, but this started as long ago as in the 1960s.

[123] L'Hôte (2000: 17): "… le paramètre déterminant de la valeur de température moyenne annuelle, la latitude n'étant qu'un facteur secondair".

and south of the great sand dune which stretches from Yagoua in the south-east to Limani which is more in the north-west, and which is probably "a beach related dune" (Obale-Ebanga 2001: 27) of eolin origin from the time that lake Chad was much more extended. North of this line the geomorphology is part of the Chad basin. Here the vast floodplain of the Logone stretches out, without any distinctive interruptions. "The Chad basin is […] composed of sediments from several sources, including lacustrine deposits exposed through the regression of the lake; alluvium, comprising fine and coarse feldspatic sands from the Logone and Chari rivers and sandy clayey alluvium from the Mandara highlands." (Obale-Ebanga 2001: 27). Along the Logone, the soils are mostly hydromorphic vertisols consisting of mainly argilic particles. On the inner (= north) side of the Yagoua-Limani sand-dune, soils are mostly of the planosol type (Brabant & Gavaud 1985).

South of the dune ridge, the landscape consist of subdivisions and compartments, erupting in small massifs with high rising inselbergs (especially on the Mandara Mountains plateau) and, in the pediplain along the southern border, bristly rock stumps. It is possible to distinguish four relief zones (see Figure 4.4, in colour quire):

1) the Mandara Mountains in the west,
2) the foothills to the east,
3) the Diamaré plain, again eastward, extending into the Chadien plains, and
4) the pediplains of Kaélé in the south, more or less parallel to the southern border of the province with Chad.

The Mandara Mountains are the continuation of the western volcanic range that starts in the south with Mt. Cameroon, the highest point in West Africa, and still an active volcano[124]. In the north the rocky solitary peaks and steep slopes up to 1300 m are a popular tourist destination[125]. More to the south the slopes are less steep. There the landscape consists of high plateaux at an altitude of around 1000 m, with occasional granite inselbergs rising yet another 200 to 300 m (Morin 2000). The mountains consist of gneiss and granite covered with soils composed of lithosols of volcanic origin. In the southern plateau region they have a thin profile and a low clay content that makes them less fertile and not suitable for highly productive agriculture (Boutrais 1984: 76). These soils are supplemented with regosols, sometimes from alluvial and colluvial deposition and with local hydromorph characteristics. The soils in the steep, northern mountains vary in a normal fashion from thin rock layers to pockets of deep and fertile soils, improved over centuries of human activities such as terracing (Zuiderwijk 1998, Van Andel 1998, Ndoum 2001).

The foothills have a similar basis and are covered with tropical ferruginous sandy soils of luvisol type, supplemented with leached planosols. "These soils […] are highly susceptible to degradation of their chemical and physical properties when converted from natural savannah vegetation to cropland, largely because of the loss of organic matter…" (Obale-Ebanga 2001: 28).

The same two soil types can be found in the Diamaré on acid rocks, together with cambisols. However, the most important types here are the vertisols with a sandy or clayey composition on basic rocks. These vertisols "are naturally fertile with high moisture retention capacity and with high potentials for crop production" (Obale-Ebanga 2001: 29). The heavy

[124] Mt Cameroon is 4,095 m high and erupted last in 1999.
[125] In 2000, almost 5000 tourists visited the valleys and cliffs of the Mandara Mountains.

clay vertisols in the lower lacustrine and fluvial parts are specifically suitable for dry season sorghum production. Although all vertisols are easily affected by physical degradation, the deep and fine textured soils on the lacustrine plains do exhibit a certain robustness.

Vertisols with a dry pédoclimat or local patches of planosols also cover the granite and gneiss basement of the Kaelé region.

Surface water and groundwater

Within the Far North Province the only permanent river is the Logone River, although in wetter years some of its tributaries in the Far North, like the Logomatya, also keep flowing. The Logone originates far south in the Adamaoua highlands, flows east, passes through Chad, where it is joined by lots of tributaries of varying sizes, and, turning north and slightly to the west again, forms the Cameroon Chad border before ending up in Lake Chad. Its permanency makes it an important fishing river. The duration of flow in the seasonal rivers depends on the rainfall of the previous rainy season, the width of the streambed, obstacles in the streambed and the catchment area. In general, the Far North surface water as well as groundwater flows from the mountains to the Logone, in a north-eastward direction (Olivry and Naah 2000; Detay 2000). In conclusion, the Diamaré and extreme north of the province depend on rainfall patterns and the filling of groundwater reservoirs in the Mandara Mountains, as well as on the precipitation along the lengthy course of the Logone. The south-western part of the Mandara Mountains and a strip of land along the southern border of the province, however, are not connected to the Chad basin. For example, the river Louti, which starts west of Mokolo, finally discharges into the Benoué River. So here the rivers flow south (see Fig. 4.2). The same applies to the filling and flowing of the aquifers in this Atlantic basin, although Detay (2000) also stresses the fact that lots of aquifers in the Mandara Mountains are discontinuous, that is they do not connect to the southern ones.

Two artificial lakes (near Mokolo and near Maga) serve the drinking water supply of Mokolo town and function as irrigation pool for rice production respectively[126]. The second one was constructed in the late 1970s by way of a dam in and along the Logone river. The rice was meant to feed the urban populations, but it turned out to be too expensive in comparison with Asian import rice. Locally it resulted in an ecological[127] as well as social disaster[128]. Therefore, in the early 1990s, a project was started to redress the implementation of the irrigation scheme and diminish the negative effects[129].

Furthermore, lakes and rivers can be a rich source of fish, both to enhance the biodiversity of a region and as a natural resource for human inhabitants. Examples of fish-rich natural lakes in the Far North are Lake Chad in the uppermost north part of Cameroon and Lake Fianga on the southern border of the '*bec-du-canard*' with Chad. Because of their position, both lakes

[126] There are some smaller ones as well, but some of these are so small that in dry years they do not survive to the next rainy season. The barrage of Rhumsiki (in the Mandara Mountains, between Mogodé and Bourah), for instance, serves a small, but year-round artificial lake, used mostly for drinking water for animals in that region.

[127] The fish stocks in the Logone and therefore in Lake Chad became disturbed, the make-up of the grazing lands of the floodplain changed to include more annual instead of perennial grasses (Scholte *et al* 2000) and the availability of water in the Waza Nature Park diminished (see also Vanpraet (1976), Coe and Foley (2001), Drijver and Marchand (1985) and SOGREAH (1980)).

[128] The function of the floodplain and the river as a resort for diverse ethnic groups in the further dry Sahel surroundings diminished dramatically. Fishermen and cattle keepers had to look for other sources and even farmers saw their yields decline (see Drijver and Van Wetten (1992) or Van Est (1999)).

[129] See Drijver and Van Wetten (1992); IUCN (1996); Scholte (2003), Kari and Scholte (2001) or Loth 2004.

have to be shared with neighbouring countries. Lake Chad is particularly suffering from a continuous depletion over the years, in addition to a seasonal halving during the dry season due to evaporation. The Logone River is the most important source of fish in the region[130]. Several ethnic groups, like the Kotoko, have based their livelihoods almost solely on fish[131]. Like many other renewable activities related to natural resources, almost all fishing is a seasonal occupation, especially in the Far North where the seasonal flooding of the Logone sets the time for spawning and growth.

Natural vegetation

The diverse types of soils together with the climatic circumstances contribute to several different vegetation covers, from tree and shrub savannahs to extended grass-fields in the Logone floodplain. There, due to month-long inundations, trees cannot easily survive. Because of the age-long habitation and the high population density, almost all natural vegetation is of a secondary nature[132]. Fotius (2000) speaks of "dégradeés ou anthropiseés". This description refers to the classic ecological categories of the exploitation and conservation phases, in which the latter, on the basis of slow accumulation and the storage of energy and material, was called the climax stadium, or primary forest. However, this notion passes over new ecology ideas of a permanent cycle of discontinuous patterns of change in four subsequent ecosystem 'functions' (or stages), in which not only accumulation of capital, but also "the degree of connectedness among the variables" (Holling and Sanderson 1996: 62) plays a role. In this concept man is a normal part of the ecosystem.

Nevertheless, nowadays some areas of the Far North are totally bereft of human habitation and sometimes even totally or seasonally unused by humans. Where population densities are low and climate and soil condition are favourable, almost fully grown savannah woods can be found. Examples are certain areas on the Mandara Mountains Plateau or that part of the Diamaré that stretches between Mindif and Moulvoudaye. The most notorious examples are located north of the sand-dune, namely the two nature parks of Far North Province being the small Kalamaloué, in the floodplain far north, and the bigger Waza National Park, one-third of which is covered by *Acacia Seyal* forest. The second park in particular, with its high biodiversity, is an attractive tourist destination.

South of the sand dune the vegetation mirrors the soil types of the four relief zones. According to Brabant and Gavaud (1985), the natural vegetation in the mountains consists of woody savannah of the Medio-Sudan altitude type with *Isoberlinia doka* being the most important tree. Further to the north *Anogeissus leiocarpus* and *Acacia* (or *Faidherbia) albida* dominate the tree species. The foothills are home to the same woody savannah with a *Anogeissus / Faidherbia* composition, supplemented in some areas by *Boswellia dalzielii*[133] and *Combretum* spp.. In the Diamaré plain, where there is still some rocky subsoil, *Anogeissus leiocarpus* is again dominant, together with *Sclerocarya birrea.* In addition, sandy-clayish areas are dominated by *Acacia Seya*l and *Balanites aegyptica*. Moving further to the south-east, there are vegetation covers of *Amblygonocarpus andongensis* and *Detrium microcarpum*, together with *Guiera*

[130] See, e.g. Drijver *et al* (1995).
[131] See Van Est (1999).
[132] According to Brabant and Gavaud (1985).
[133] Obale-Ebanga (2001: 30) refers to this species as growing on the inselbergs.

senegalensis. Approaching the Chadien plain, in the '*bec-du-canard*' corner, these species dominate in interchanging areas[134]. In the open savannah where there are a lot of anthropogenic influences they are supplemented with *Acacia* species and *Piliostigma reticulata*.

All these different natural bush areas can serve as grazing lands for livestock because of the growth of fine (and coarse) annual and perennial grasses, such as *Hyperrhenia bagirmica*, several herbs and edible bushes, whose leaves provide food for small ruminants[135]. According to Gaston (1996) the general year round carrying capacity of the Sahelo-Sudan is 3 – 9 ha/TLU[136]. A Tropical Livestock Unit (TLU) is equivalent to 1.42 head of cattle, or ten (hair) sheep or goats (Dietz *et al* 2001: 198). Breman (1975) has calculated a more positive outcome in the 1000 mm rain belt of up to 1.2 TLU/ha[137].

In addition to that the bush is useful for the extraction of fuel wood and timber, both for direct use and to sell to urban centres[138]. The bush is also indispensable for all sorts of minor 'forest' products that are used directly in households or as raw materials for small-scale manufacturing[139]. Examples are grass for roofs, mats and storehouses for own use or sale, wild berries used to prepare cookies for sale and several sorts of green leaves used as ingredients to

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134 See, e.g., Donfack *et al* (1997), Fotius (2000), and Seignobos (2000a).

135 Some of these bushes and trees, such as *Balanitis* and *Acacia* species, have high protein contents.

136 Gaston (1996) divides the Sudano-Sahel pastures of the Lac Chad basin into five different types. The most important in Cameroon are 1) the waterlogged soils (flooded during and after the rainy season: the Yaéré) that can produce 2000 kg DM/ha, especially when managed by burning; 2) the sandy soils which produce, on average, 1000 kg DM/ha and have a year round carrying capacity of 4.5 ha per TLU. This type is useable all year round, although the browse layer is somewhat over-grazed and the amount of coarse grasses that are inedible in the dry season increases; 3) antropic formations with a cultivation-fallow complex. During the rainy season the livestock here have to survive on the fine grass layers of the fallow fields (e.g. *Eragrostis tremula*) that can produce up to 1000 kg DM/ha, and during the rest of the year on crop residues and the browse layer. In mountain areas a production of 2000 DM/ha can be achieved (rainy season carrying capacity of 3 ha/TLU) with *Aristida kerstingii* and *Loudetia togoensis*, but both are inedible in the dry season, thus resulting in an out-migration to the Yaéré . Under very unfavourable conditions up to 9 ha / TLU is needed.

137 According to Breman (1975) palatable primary production (DM of herbaceous cover) of grazing lands in the 1000 mm per year precipitation belt is roughly 2.8 ton / ha / year (NB on favourable soils etc.); according to Boudet (1975) a TLU needs 6.25 kg of dry matter per day as feed. These two assumptions together correspond (roughly) to a capacity per ha of 1.2 TLU (over the year), when the rainfall reaches the average of 1000 mm per year. NB. Total biomass production is not only dependant on the precipitation but also on evaporation and the water-holding capacity of the soils (see De Leeuw and Tothill 1990), vegetation species, etc. Thus it also varies greatly according to area (see De Leeuw and Tothill 1990: 7). The number of possible TLU / ha also depends on forage quality and on the spreading of the available forage over time. De Leeuw and Tothill (1990: 2) mention a decline such that "at the end of June only 10% of the original biomass was left." When grazers are present, however, part of this assignment of "a 50% decline in standing biomass from October to March" with a subsequent acceleration of 'climatic' decline does not take place, because the animals have already eaten part of that biomass. The quality of forage depends on soil fertility, growth phase of the grass (older grass contains less protein) and precipitation level (higher mean annual precipitation gives lower protein contents). De Leeuw and Tothill (1990) mention that a certain soil type in a 400 mm rain belt gives an end-of-season N-content of grass of 1 %, while this same soil type only produces grass with 0.5 % nitrogen in the 1000 mm belt. Even when there is enough bulk grass, cattle will lose weight at the end of the dry season in this precipitation zone.
In addition, Breman (1975: 6) estimates that there is a more real capacity for cattle in the 1000 mm belt of 0.7 TLU/ha, because "productivity under an average rainfall one or two times less than the standard deviation" is more interesting to "avoid the risk of destroying the grassland beyond repair during relatively dry years".

138 See, for example, Geist and Lambin (2001); Ali and Peters (2001).

139 See, e.g. Den Heijer (1998), Van Ommeren (1998) or Quan (2000: 32).

make sauce. Another example is wild vegetables or small game that can serve as emergency food in times of hardship (e.g. wild yams, mice) or as a steady stock to add to the normal diet. The last important supplies from the bush are the traditional medicines, from plant origin and from (small) animals.

Subsistence production

Although big differences in intrinsic fertility and vulnerability for erosion exist, most of the soils are useful for agricultural purposes. In general, rural farmers produce for their own subsistence and that of their family members. However, all surpluses of this domestic production can be (and are) sold on local markets, both directly and sometimes via small-scale middlemen.

The most important crop that the inhabitants of the Far North produce for subsistence purposes are different sorts of sorghum (*Sorghum bicolor bicolor*[140]). Pearl or finger millet (*Pennisetum glaucum* and *Eleusine coracana*) is only rarely cultivated. Without sorghum or millet, people feel undernourished. A preference for what the inhabitants call white, yellow or red sorghum[141] depends on the area and ethnicity of the farming group. The so-called *sorghum réplicé* (called '*muskuaari'* in Fulfulde) has been cultivated for approximately fifty years, especially in the Diamaré plains from Mokolo to the south boundary of the province and up to the '*bec-du-canard*' in the east, on clayish vertisols (called '*karal*' in Fulfulde). This sorghum type does not need rain while maturing since it grows on the water-table in the soil. At the end of the rainy season it is sown in beds. Later the seedlings are transplanted to fields that have to contain enough water in the subsoil to support growth until the end of January or beginning of February, when the grains are ripe. If the field as such cannot hold enough water, conservation measures, such as small dikes (tied ridges), can improve the water-content by giving the fallen rain more time to penetrate the soil. Obviously, this crop can help to prevent shortages in the next cropping season, especially after a bad harvest due to pests (e.g. locust[142]) in the rain-fed crops. Nevertheless, after a year of bad precipitation, most of the time the transplant-sorghum yield also fails.

Maize (*Zea mays*) and rice (*Oryza sativa*) are gaining in popularity as part of the staple diet. The Fulbe, for example, prefer maize to sorghum. Especially the short cycle maize varieties that are already mature in August can help to get through the hunger period, although total production is lower than in the case of experimental production[143]. One of the problems with maize production is the risk of low yields due to high water demand and a susceptibility to weeds. In addition, maize requires good soil fertility. Farmers mostly cultivate this crop adjacent to the compound so they can administer household refuse[144]. Subsistence rice production takes place mostly in areas that are swampy (during the rainy season); irrigation rice is mostly a cash crop (see section 2.3.1).

In addition to these cereals almost all farmers produce other crops, such as cowpeas (*Vigna unguiculata*), common beans (*Phaseolus vulgaris*) or Bambara groundnuts (*Vigna subterranea*)[145], all of which forms an easy protein source and, being leguminous, enhances the fer-

[140] Raemaekers (2001).
[141] To complicate matters, in the North the general translation of 'sorghum' into French is "millet".
[142] Njomaha (2004: 27) noted 9 famines in the Far North since 1960, of which 4 caused by locust infestation.
[143] See Njomaha (2004: 30).
[144] Raemaekers (2001:23 - 45).
[145] Almost all ethnic groups consider the Bambara groundnut as a typical women's crop.

tility of the soil[146]. Diverse root and tuber crops and vegetables also supplement the household food supply[147]. Although groundnuts and soya beans (rare, but on the increase) are mostly produced for cash, they do supplement the food supply of the producing households. In the Mandara Mountains, before the cash crop varieties were introduced by the French, a local groundnut variety was already produced[148]. Several farmers also grow tobacco in a corner near the compound for their own use and, if the harvest is sufficient, to boost the household income. Lemongrass (*Cymbopogum spp*) is only cultivated occasionally, mostly within the compound, to be used as essential oil in herbal teas and by healers against various diseases. Several types of fruit trees are planted adjacent to the compounds or on the river banks.[149]

4.2.2 Human domain

Health

In the Far North, all indicators with regard to the health situation are worse than the country average, except for the rate of visits to informal health centres (see Table 4.2.3) and some infectious diseases that are related to a more humid climate. Nevertheless, "surveys show that Far North province is still a region with widespread endemic epidemics" and that "the most frequent diseases are almost all related to problematic hygiene" (De Backer *et al* 2000: 138, *translation RN*)[150]. This is mostly due to poor health information and education services. In the whole country, as well as in the Far North, some indicators score lower for poor people (and therefore farmers) than for non-poor people. Examples are the rate of visits to formal health centres, the average annual spending on health and the percentage of vaccinated children. With regard to the latter indicator, the Far North reveals a smaller difference between poor and richer households than other Cameroonian provinces. This may be due to an overall less adequate vaccine supply to the Far North than to the rest of the country.

Table 4.2.3 *Some health indicators for the Far North province compared with rural and total Cameroon* (when no other information is given, the data concerns the year 2001. Source: Ministry of Economy and Finance 2002)

	Far North Province	Cameroon rural	Cameroon total
Doctors per capita[a,f]	1 : 46 972	n.av.	1 : 14 730
Nurses per capita[a,d]	1 : 8500	n.av.	1 : 2725[g]
Formal health centres per capita[a]	1 : 34142 (where of 34 hospitals)[d]	n.av.	1 : 10 000
Formal health centre visits	67.5	72.2	75.5
Informal health centre visits	32.5	27.8	24.5
Distance to nearest health centre (in km)	4.05	5.26	3.86
Distance to nearest health centre (in min.)[b]	35.0	39.7	30.6
Percentage of vaccinated children aged 12 - 23 months[c]	34	50.3	55.3
Perc. of > 23 months never vaccinated	32.8	22.8	19.2
Annual spending on health per capita (Fcfa)	6,220	12,922	22,036
Share of health spending on overall expenditure (%)	3.2	7.6	6.5
HIV/AIDS prevalence (%)	13.1	n.av.	11
Prevalence of other infectious diseases (in %)	Malaria[e]: 8.6 Diarrhoea: 2.1 Respiratory: 2	n.av.	Malaria: 11 Diarrhoea: 2.8 Respiratory: 9
Life expectancy	42	n.av.	48[h]

[a] = worsened since 1987 (e.g. then the number of nurses reached WHO standard with 1 for every 3000 inhabitants); there has been a slight improvement only since 1995
[b] = the nearest is not always the one visited, because of a "lack of technical equipment needed to treat the main diseases that occur in the geographical area" (Ministry of Economy and Finance 2002: 63)
[c] = vaccinations are: TB (for the Far North and the whole of Cameroon resp. 40.5 and 70 %); DTP (50 and 50%); Polio (47.9 and 68.4)[151] and measles (14.6 and 61.2)
[d] = information for 1997 (De Backer *et al* 2000: 135-137)
[e] = the diagnosis 'malaria' is not always confirmed with laboratory tests. In most small health centres and by all lay people all unknown fevers are referred to as such.
[f] = information for 2003[152]
[g] = information for 1998 (World Health Organisation 1998)
[h] = over 2003: UNDP Human Development Indicators

In addition to the disequilibrium between the provincial population and the number of medical personnel compared to other provinces (in 1995 the Far North was home to 17 % of the country's population and only 7 % of its nurses and doctors[153]) the health centres and health personnel are not evenly divided either over the regions or according to population densities. Maroua, as the provincial capital has a disproportional amount of doctors (15 of the total of 48 in the whole province[154]) and more than its proportional share of hospitals. In some areas there are several hospitals less than 1 km from each other, while other areas suffer from a total lack of health centres. Most nurses work in health centres, instead of leading rural health posts as recommended by the WHO. Another problem is the distribution of medicines. This is difficult, now the State institution assigned this task (Onapharm) has been closed down because of budget shortages. Especially in the Far North, with its poor infrastructure and distance to the metropolis, many health centres are not able to distribute enough or the right medicines.

Education

The Far North literacy figures are very low compared to those of the rest of the country. Although numbers have been on the increase since 1995 (after a steep decline due to the economic crisis of the 1980s), differences between the north and the south remain almost the same. In 1999, the whole country had a school enrolment percentage of 69.22, while the Far North only achieved a meagre 25 % (Yaya 1999). Differences between school attendance by boys and girls are high in the Far North province, especially in the rural areas where almost no girls attend school.

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146 Leguminous plants bind nitrogen out of the air due to their symbiosis with nitrogen-binding Rhizobium bacteria in their root system.
147 For example: (sweet) potatoes, yam, African eggplant, hot pepper, pumpkin, and several leaf vegetables.
148 See, for example, Van Beek (1989: 622).
149 Especially guava, mango, papaya and citrus, but occasionally also a small type of banana.
150 In the beginning of the 1990s severe epidemic outbreaks of yellow fever, cholera and meningitis were recorded. Almost every year during the dry season, a number of areas of the North are hit by meningitis outbreaks. A measles outbreak, with mortalities amongst young children and old aged, was recorded during the dry season of 2001, especially in the south-east of the province.
151 Especially the low vaccination rate for poliomyelitis in the Far North is a subject for concern because of the influx of wild polio-virus from north Nigeria, where traditional leaders have forbidden vaccinations against this disease.
152 Eya (2003).
153 See World Bank Group (1996).
154 De Backer *et al* (2000: 135).

Unfortunately, the economic crisis has resulted in the current low number of teachers. This is because insufficient young inhabitants have been educated to fulfil the role. This is especially a problem in the Far North, where less than one teacher with an official degree is employed per primary school. The rest of the teachers are so-called parent teachers. These are voluntary teachers, paid by the pupils' parents and mostly with only some years of secondary education themselves. In 1999, the number of pupils per teacher nationwide had increased to 84 from 66 in 1995. In later years, the number of pupils per teacher increased further. In the Far North this amount frequently reached 150 (Yaya 1999). For some literacy figures of the Far North compared to those of the whole country: see Table 4.2.4.

Table 4.2.4 *Education-related indicators for the Far North and country in 2001* (source: Ministry of Econo my and Finance, 2002; Iyébi-Mandjek 2000, and Yaya 1999)

	Far North Province	Cameroon rural	Cameroon total
Literacy for men	36.1	66.5	77.0
Literacy for women	14.3	46.6	59.8
Total literacy	24.4	55.7	67.9
Average spending (per capita) on education; in Fcfa	11 536	n.av.	48 046
Distance to nearest primary school (in km)	2.56	1.99	1.62
Number of pupils per teacher	> 100 (up to 200)	n.av.	84
Percentage of 6 - 14 years old registered in schools	< 50	n.av.	78.8
Number of pupils in secondary education[a]	17 500	n.av.	500 272

[a] = figures over 1990 from Iyébi-Mandjek 2000 and Unesco Annual Statistics 1999

The situation with regard to secondary education is also disheartening. As can be seen in Table 4.2.4 less than four percent of all pupils in secondary schools are from the Far North. Since 1990, the total numbers have increased but provincial differences have remained the same. With a population equal to 17 % of the country's total population this is a grave under-representation. As regards the first secondary education cycle of four years, there were 32 colleges for general and 7 for more technical education in 1997. Thirteen post-primary education units for arts and household-related issues are situated in rural areas. The second cycle of three years, leading to a baccalaureate, was only covered by 15 '*lycées*', of which only two offered technical subjects. There are no higher education institutes in the Far North Province. The nearest university is in Ngaoundéré, some 500 km south of Maroua.

4.2.3 Economic domain

Cash crops

Of the cash crops produced in the Far North, groundnuts and cotton[155] are the most important. Both were introduced by the French colonial administration, before and after World War II respectively. Since the 1990s, beans have gained in importance now that there is demand on the internal and Nigerian market and because the Far North has a favourable climate. Predominantly, these are all small-scale cultivations, apart from the more extended irrigated rice schemes of

[155] Where no other reference is given, the information about groundnuts is based on Iyébi-Mandjek and Seignobos (2000b) and that about cotton on Roupsard (2000).

SEMRY[156] (created in 1971 by the government) along the Logone[157].

In some areas onions, which were introduced by the Islamic population[158], and sometimes garlic are produced with the help of small-scale irrigation. Substantial areas along rivers are used for onion production in particular. This can, in turn, cause a rapid rise in the commercial value of the land. Nowadays, North Cameroon is known as the major onion-producing region in the country (Njomaha 2004: 193). It can generate high incomes for the farmers involved. The supply of taro, potatoes and sweet potatoes to the towns originates in the Mandara Mountains and foothills. In addition, the French introduced fruit as a cash crop in the 1950s. Since new varieties were developed in the 1980s (Njomaha 2004: 164), commercial fruit plantations now exist around Maroua[159]. In the towns and along the major roads small quantities of tomatoes and carrots are sold. In addition to that, tomatoes are produced for 'export' to the south of the country. In general, commercial vegetable cropping is only carried out near towns (such as Maroua, Mokolo, Yagoua) because they perish quickly if transported over any longer distances.

After a start of the cultivation in around 1930, groundnuts remained the only export crop from North Cameroon until well into the 1950s. The French encouraged cultivation by means of favourable prices, they introduced new, high-yielding varieties and provided all the farmers south of the sand-dune, from the mountains and mountain plateaux to the eastern borders with Chad, with information on good farming practices in relation to groundnuts. However, when cotton cultivation started in the Far North, the two crops became competitors and groundnut production survived only in the foothills and mountain plateaux where there were favourable physical circumstances. In the Diamaré plains, the better cotton soils, the high prevalence of groundnut diseases and the easier combination of cotton with (the increasingly prevalent) transplant-sorghum, caused an almost absolute disappearance of groundnut production. Only on the *Yoldé* and *Yolkonde*[160] soils further east did some groundnut-production persist.

Nevertheless, production more than doubled between 1958 and 1983 (15,000 ton of grain) despite the drought years. Both the surface and the yield/ha increased. The latter changed from 500 kg/ha in the late 1960s to 1,000 kg/ha in the Diamaré in 1985. At that moment, the State did not believe any profit was to be gained from groundnuts and ceased all its involvement. However, commercial groundnut production, albeit as a lower proportion of the total production, continued. The groundnuts were sold partly on the foreign market, especially Nigeria, but mostly on the internal market. A high quality groundnut is transported from the northern Mandara Mountains to the south of the country for oil and sweets, while the mountains plateaux and the Kaélé plain export a low quality groundnut to the west for paste. Small entrepreneurs buy at village level from the end of October to mid February and sell to bigger merchandisers. Finally, the large-scale trade is in the hands of only a small number of merchants. Prices differ according to month or even week of the month - when festivities are imminent - according to yield and supply and according to the market location (e.g. on the Nigerian border prices can be twice as high as in inland areas).

The new cash crop of beans also competed with groundnuts as regards land and agricultural labour. Nowadays, lots of farmers throughout the north cultivate this crop. The average yield

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[156] SEMRY = *Société d'expansion et de Modernisation de la Riziculture de Yagoua*.
[157] See, for example, Harre *et al* (1992), Van de Walle (1989) or Van Est (1999).
[158] See Njomaha (2004: 157).
[159] See for example Timmermans and De Groot (2001).
[160] Fulfulde for Cambisols.

is 900 kg/ha. In general, commercial hauliers take 30 bags of beans to the south and west for every 100 bags of groundnuts. This crop is increasingly traded in the wider region, for example, in Nigeria and Gabon (Njomaha 2004: 194).

Commercial cotton cultivation started in the Far North in the beginning of the 1950s. The French (State and private interest) set up a system of seed, chemical fertiliser and information distribution throughout the whole north up to the sand dune that traverses the Far North[161]. They offered a fixed price independent of distance between production place and export harbour, with such disturbing a possible Thünian process (see chapter 2). The foothills of the mountains appeared to offer the best physical circumstances, resulting in the highest yield (700 – 1000 kg/ha) and the highest total production to date. Moreover, the soils in the plains were good and, as already mentioned, the easy combination with *muskuaari* transplant-sorghum meant that cotton started to dominate the groundnut fields in the Diamaré. According to Njomaha (2004: 164) the amount of land devoted to cotton is still on the increase. This is probably due to the access cotton production generates to farm inputs such as fertilisers, which can subsequently be used by the farmer on his other crops. Yet, cotton could never replace groundnuts in the high mountains and plateaux of the Mandara. After a temporary decline in production during the late 1980s[162], cotton production in the whole north of Cameroon was estimated at 115,000 tons (Raemakers 2001*)* in 1992-1993, while this increased again to 223 100 ton from 190,920 ha in 1997.

From the beginning, the French and Cameroonian cotton promoting institutions (nowadays SODECOTON[163]) organised the production in a kind of production chain from seed supply, via fertiliser and equipment supply to guaranteed sale by the farmer to the SODECOTON, binding the producers with easy credit in the early days of the growing season. This institute constructed proper physical infrastructures for more remote areas. In order to reduce the labour competition with the food crops, it encouraged the use of ploughs in cotton production. On the one hand this meant a disposal of the soil to easy dehydration[164]; on the other hand it meant an increase in animal husbandry by farmers who presently did not have their own cattle, donkeys or horses.

Farm animals

The Far North Province, with its extended, almost parasite free bush lands, was an ideal region in which to keep livestock. For that reason, various nomadic groups migrated there over time. Invasions, raids and unfavourable climatic circumstances, as well as imprudent policies may from time to time have hindered the increase in the number of cattle in certain areas or the whole province but, in the long run, the total number of livestock has steadily increased. In certain areas numbers increased quickly, for example, in the Kar-Hay sub-department (see Fig 4.2: Mayo Danay department with its capital Doukoula) an increase of up to 100 % was observed between 1950 and 1980, due to the increased wealth of the people through cotton production and the capitalisation of migrant remittances.

During the droughts of the 1970s, the total number of livestock in the whole Sudano-Sahel zone decreased. But in the Far North of Cameroon, cattle numbers did not decline because lots of cattle nomads sought refuge in the water rich areas of some of its regions (e.g. the plateaux of

[161] See Zuiderwijk (1998: 152-192) for a history of cotton production and cotton institutions in Cameroon and the Far North.

[162] Although the production in the Far North in 1989 was still as high as 66,000 ton on 53,500 ha.

[163] *Société du Développement du Coton* (Cotton Development Corporation).

[164] Especially in the Mandara Mountain plateaux this turned out to be disastrous: see Van Beek (1989: 636).

the Mandara Mountains). However, the total of small ruminant numbers did decline during the 1972-1974 droughts because this type of animal is more easily commercialised or used as food. The subsequent 1980 droughts also depleted the wells in the former refuge areas. This time, the total livestock numbers decreased to less than 30 %. The transhumance areas were especially badly hit, such as Logone-Chari department (halving of the numbers from 228,000 in 1980 to 122,000 in 1990) and the Mindif region, where a 30 % decrease occurred. This is notwithstanding the fact that, in 1985, herds that had sought refuge in Chad in the 1960s and 1970s returned because of the civil war there (Seignobos 2000e: 115-119; Boutrais 1984: 433; Beauvillain 1989: 428). This time the numbers of cattle declined dramatically in Kar-Hay as well.

Table 4.2.5 *Livestock numbers in the Far North over the years (long term).*
Source: Seignobos (2000e: 115-119); Boutrais et al (1984: 433); Beauvillain (1989: 428); Djonwé (2001); Délegué Vetérinair Provincial (2003); Njomaha (2004: 47))

	1950	1980	1987	1993	1998
Cattle	484 000	908 000	605 333	689 040	1 147 038[a]
Sheep	960 000	433 000	720 000[b]	750 000	688 471
Goat	(together)	623 000	920 000[b]	937 500	988 763
Horses	12 180	n.av.	6 090	n.av.	6 561
Donkeys	n.av.	20 000	n.av.	n.av.	23 216
Pigs	n.av.	n.av.	n.av.	24 000	62 253
Poultry	n.av.	n.av.	n.av.	1 025 000	1 146 630

[a] = this augmentation is mainly due to a rise in numbers in the Logone floodplain since the restoration of the flooding by the Waza-Logone project[165].
[b] = between 1985 and 1990, sheep and goat numbers remained more or less the same.

After the start of a livestock number restoration from the late 1980s onwards, a drought period that influenced numbers occurred again in the early 1990s. Since 1995, numbers have again been on the increase (see Table 4.2.6), although certain areas are still subject to ongoing decline. For example, according to Djonwé (2001), cattle numbers in Mayo Tsanaga department decreased from 92,428 cattle in 1991 to 73,250 in 2000.

Pig numbers increased from the early 1990s onwards, because of the rising demand from the south. There, pig production stagnated due to severe epidemics. Only the non-Muslim population is engaged in pig farming and it is done especially in beer brewing and rice-producing areas where left-overs are abundantly available as pig feed[166].

It has to be realised that all numbers (especially of ruminants) are estimates. It is very difficult to count the numbers of cattle and small ruminants. Animals are constantly on the move with their herders, not only during the seasons and years, but also during a single season. Cattle herders always seek the best places to graze their herds, whether this is across the border of a department or the country. Asking owners about cattle numbers does not work. It is a cultural habit not to tell anyone about it, because showing off about your wealth can cause general misfortune or make others jealous and thus bring you bad luck (e.g. by performing witchcraft or by accusing you of witchcraft). Even counting during vaccinating procedures does not provide any real numbers because not all cattle are brought. Due to the fact that a head tax has to be paid on

[165] See, e.g., Scholte (2003) or Loth (2004)
[166] Njomaha (2004: 166)

cattle, owners only get that number of cattle vaccinated that they deem necessary to obtain travel licenses and to obtain high enough protection levels against the diseases.

Table 4.2.6 *Livestock numbers over the years (shorter term) in Far North Province*
Source: Djonwé (2001) and Délegué Veterinair Provincial (2003)

years	93 - 94	94 - 95	95 - 96	96 - 97	97 - 98
Cattle	689 040	585 400	987 000	1.004 000	1.147 038
Sheep	751 048	593 000	622 650	653 782	688 471
Goats	938 393	784 998	824 276	865 489	988 763

Non-agricultural economic activities

Off-farm

The off-farm activities performed by town people are of particular importance. Apart from a large number of civil servants, who come mostly from the rest of the country, and employees of international NGOs and churches, some of whom come from abroad, most people who earn their income from non-agricultural sources, are (bigger and smaller) traders. The merchandise may be import or export products of (small-scale) industrial or agricultural origin. Import and export can take place over international boundaries with Nigeria or Chad, or over provincial boundaries with regions as far south as those bordering the Atlantic Ocean. The transport within the province of fuel wood from rural areas and regional markets to towns can also form an important element of trade for individual middlemen or bigger urban-based companies[167]. In the towns and larger villages, several types of service-related employment can be found, for example in restaurants and shops, in motorbike 'public' transport, in education or in health centres. The rise in the number of mobile telephone networks has led to an increase in individually-operated, roadside telephone posts.

Trade is also one of the most important off-farm activities in rural areas. Some regions attract tourists leading to employment opportunities in hotels, as guides, etc. However, this option is only limited to very few localities. For example tourist trips from Maroua to Waza National Park or to the Mandara Mountain ridge along the border with Nigeria serve as a source of income.

In a number of areas, whole ethnic groups base their life on fishing. The Kotoko in the Logone floodplain are a good example. There, most of the time women catch fish for household consumption and most men catch fish to sell at the market. According to Prins and Mahamat (2003), a total of 12,000 tons of fresh fish per year is caught in the floodplain and Lake Maga[168], most of which is sold to the towns of the Far North and exported to Nigeria and Chad[169]. Further to the south, some fishermen and fish traders use the catch from Lake Fianga in Chad to sell at local markets.

Several young men regard banditry as a way of living. They form groups of highwaymen and rob rich merchants on their way home after a day of healthy trading at a regional market. The State's response to this phenomenon was the installation of a semi-military 'anti-gang', with a

[167] See e.g. Ali and Peters (2001); According to Njomaha (2004: 166-67) fuel wood extraction and sale take place in accordance with Thünian processes (see chapter 2).

[168] Worth 2.3 million Euro (Prins and Mahamat 2003).

[169] Because of a lack of fuel wood with which to smoke the fish properly, an enormous amount of pesticides is used to conserve it. This poses a major threat to the environment and to the health of the fishermen and consumers (Prins, pers. comm.).

broad mandate. Some say they even had the license to kill directly, but this has given rise to deep concerns in the international community fearing a downward spiral of diminishing human rights[170].

On-farm

Both men and women gather and cut fuel wood for sale from nearby bush areas and their own fallow land. This has increased since the 1970s – 1980s droughts as an alternative income source when crops failed.

The petty trade of various types of handicrafts and prepared foodstuff or drinks based on agricultural crops or bush products serve as a permanent cash provider, especially for women. For men, labour migration is an important income-generating activity in the Far North. Men tend to follow the harvest season of the various crops from densely populated areas such as the north Mandara Mountains or towns. Between the sowing and harvesting of the fields a migration wave moves towards the North Province (Bénoué area) to help in the earlier harvest there. After the harvesting of personal crops in December-January, the transplant sorghum (*muskuaari*) harvest in the Diamaré plains attracts lots of labour migrants from all over the province.

4.2.4 Social domain

Political-economic factors are not only important for the way natural resources are exploited, they also co-determine whether or not these resources diminish. In addition, they set the stage for (connected) conflicts and the resolutions thereof.

The actual situation is based on former constructions (either being in accordance with such constructions, or rejecting them) and on "situated knowledge" (Harraway 1988) that "not only results from a researcher's specific location in the material and cultural realities of the world, but also in the chronological particularities of a certain moment in time" (Frances Gouda 2002, personal comment[171]). For that reason, I will describe the political-administrative circumstances from the pre-colonial time onwards. Because the situation in the Far North Province is deeply influenced by the powers and influences of successive local and invading ethnic groups, this description will take the form of a short, general historical overview. It has to be added, though, that the information on which this description is based is derived mainly or even only from sources of dominating groups, such as Islamic invaders or European colonisers, and as such is unavoidably biased.

Apart from the information on the cultural domain given in this historic overview, the actual cultural diversity and the related issues relevant for the research are dealt with in a separate section below.

Political and administrative organisation and history

The north of Cameroon is often called the "crossroads of Africa". This means that many different ethnic groups have moved in and intermingled between the escarpments of the Mandara Mountains in the west and the floodplain of the Logone River in the east. From early times onwards, incoming peoples have swept across the country and have (mostly) incorporated the people already there into their cultural and political systems[172].

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[170] See, for example, Amnesty International reports (1998 or 2000) or IRIN (2002).
[171] See also Francis Gouda (2001).
[172] See, e.g., Martin (1981).

One of the oldest known civilisations was that of the Sao people in the eastern parts of the Far North. This civilisation expanded in the early centuries after Christ and then met its demise in around 1000 AD when the area was invaded by Kanem warriors.

The Kanem Empire started to invade the region and put southward pressure on it from the 7th century onwards, especially when they converted to Islam in the 11th century. Islam gave them access to horses, chain armoury, weapons and, last but not least, the incentive or legitimacy to conquer their surroundings on religious grounds. From the 6th century onwards, various tribes developed and became established in the Mandara Mountains, first in the north (e.g. the Mafa) and later in the plains more to the south. According to current theories they all originate from the same ancestors in Gudur, which for most groups is still the religious centre[173].

When the Kanem were defeated by the Bulala from the north-east (who also pushed other people towards the south-west) in the 15th century, they changed their headquarters to the south-west of Lake Chad and formed the Bornu Empire. These Bornu, and people from the eastward neighbouring kingdom of Wandala (or Mandara) that established itself in the 15th century in the eastern foothills of the northern Mandara Mountains coming from the Baguirmi region in Chad[174], then started to conquer the Sao, Gamergu and paléo-Marghi (the predecessors of, among others, the Kapsiki). In 1576, for example, the troops of sultan Idriss Aloma forced people to hide in the inaccessible mountains and swamps, or flee as far south as the Benoué basin.

In the heyday of its power the Bornu realm stretched into the Adamawa grasslands in the south and into the Haussa lands of Nigeria. The great king and statesman, Alma, strengthened the links with the Muslim world of Egypt and the Ottoman Empire and installed a Sharia-type of law around 1600. Even at that moment, autochthonous groups were effectively able to use their own legal system of customary law most of the time.

Although in the latter days, Bornu became a centre of learning and scholarship, due to the scarcity of natural resources in the Sahara and Sahel zone, the empire (and other empires before) had used war to acquire wealth and power over the crossroads of trade. Even in the early centuries after Christ, the inhabitants of North Cameroon established contacts across the Sahara dessert with the coastal peoples of North Africa, the Egyptian dynasties and the Roman Empire. In addition to salt, gold, ivory and ostrich feathers, the most important commodity was slaves. Slavery was a common practice in Africa, where inter-group wars and in-group fights led to the capture of adversaries. Also food deficits resulted in the sale of family members to groups seen as belonging to the same 'super group'[175]. However, a totally different fate awaited those domestic slaves who stayed within the region, since they were treated with respect or regarded as kin within the receiving families. This is in stark contrast to the lot of those who were transported for economic reasons along the trade routes, first to the Mediterranean and later across the Atlantic (Mbuagbaw *et al* 1987: 13). The arrival of the Islam caused the demand for slaves in North Africa to increase[176].

During the Bornu reign in the west, the new predatory empire in the north-east was that of the Baguirmi, with its headquarter being Massénya. They drove away the Bahr Erguig from

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[173] Mohammadou (1984), Van Beek (1989) or Njomaha (2004).

[174] See Njomaha (2004: 42).

[175] This was probably related to mutual language origins and resemblances.

[176] The "trans-Saharan trade in goods and people [only …] came to an end at the close of the nineteenth century."(Mbuagbwa *et al* 1987: 14), when the power of both the Fulbe and the Bornu Empire came to an end.

their Banre homeland between Logone and Chari[177]. After passing the Logone, those peoples first stayed for a number of decades in the Musgum area, before moving on. Various displaced groups travelled via the Diamaré plain as far west as the mountains, where they started to make a living and merged with the present populations. Some of these groups later returned to the central-southern Diamaré[178] and established the Zumayo kingdom there. More individualistic movements were engaged in by those who worked with iron. The work of these blacksmiths, the symbolic power of their forges and their basis in towns[179], determined the structure of the societies in the pre-Baguirmi era. The Bahr Erguig, who are said to be the forefathers of, among others, the Tupuri and Mundang, travelled upstream along the Logone and Guerléo until they reached the Guissey-Tikem region. The blacksmiths are said to be the first to arrive in the Fianga and Tikem area (see Fig. 4.5 and Fig. 5.3).

More recently, in the 17th and 18th century, a counter movement started. In the Bénoué escarpment[180], pressure from the east (by Sara-Ngambay people) made the pre-Tupuri and pre-Mundang head northwards again.

In the middle of the 18th century, the eastward wave of Fulbe migration that started in Senegal several centuries earlier[181] reached the Far North Province. There they met the Mandara kingdom in the north, which was a former province of the Bornu Empire and whose people had already converted to Islam earlier that century. Just like the travelling Haussa merchants, nomadic Fulbe pastoralists sought a living in the savannah areas of Cameroon. They first cohabited peacefully with the existing populations, paying tribute whenever necessary. Nevertheless, even at that time fights took place between pastoralists and agriculturalists for autonomy and control over pastures. Pontié (1979: 119) stresses the frequency of these conflicts: “continuous struggles between herders and agriculturalists [because of] cattle theft, crop damage and the payment of tribute to the Zumaya chiefs”.

In the first half of the 19th century a *Jihad* swept through West Africa. The Fulbe armies conquered the region and established their chiefdoms, *lamidats*, as sub-emirates under the influential Adamawa Emirate of Yola. This, in turn, was part of the big Caliphate of Sokoto[182]. The Fulbe subdued the original populations in almost the whole of North Cameroon. In the Diamaré plain, the Zumayo kingdom was defeated and the population enslaved and/or converted to Islam. As was the case with other oppressed groups, over time they were completely assimilated into the Fulbe population. After several generations, the original background of the conquered groups was no longer recognisable. On the other hand, as the current non-Fulbe populations underline when they describe the disdain of the Fulbe, the Fulbe themselves are not entirely Fulbe because of their non-Fulbe lineages based on Fulbe men having married the women of their subjects. In addition, slaves that converted to Islam were given more possibilities and a better life and they therefore assimilated to the culture and religion of the Fulbe. As a result, the term Fulbe became almost equal to the term ‘Islamic’ in the Far North Province.

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[177] At a latitude of 11 to 11.5 degrees, to where the Bahr Erguig river enters the Chari.

[178] Where Moutourouwa and Lara are now situated.

[179] This can still be seen in the different mini-fortress-like shaped villages along the Logone, as well as in the Banre societies.

[180] Upstream parts of that river along what is now the Cameroon-Chad border; latitude 9 – 9.5 degrees.

[181] According to De Bruijn and Van Dijk (1995; 47) “the Fulbe entered the inner delta of the Niger during the 15th century”. From there, they spread further to the Hayre in the east.

[182] See, for example, Njeuma (1978).

Of course several defeated ethnic groups kept on resisting their conquerors because of their desire for autonomy and the harsh practices of the Fulbe[183]. In the Diamaré, the Guiziga have a reputation for being very fierce in that respect. In addition, some ethnic groups resisted Fulbe domination by hiding in the mountains (Mandara) or the swamps, as their forefathers had done. These populations attacked incoming Fulbe and (later) others from their refuge positions. Because the political organisation of the mountain peoples was totally decentralised, - meaning that each household head was chief in his own dominion - defeating such a group was almost impossible. As regards the Matakam, for example, Martin (1970: 180) describes the necessity of "conquering house per house"[184]. And some groups did manage to defeat the Fulbe completely. For example, the Mandara kingdom in the north-west, the Kotoko in the Logone floodplain and the Tupuri in the '*bec-du-canard'* (See figure 4.5), who never became Fulbe subjects. In the second half of the 19th century, the Tupuri's system of habitation in concentration centres made it possible for them to halt a major Fulbe coalition in Gouyou[185]. Nevertheless, the Tupuri-northward movement was halted and they even had to retreat to the Touloum-Guidiguis-line until the beginning of the 20th century, when the Germans took over (Seignobos 2000b: 44-47).

At the end of the 19th century, a new conqueror - this time an Arab from the north called Rabah - invaded the region. Although he put an end to the violent internal conflicts between local populations, his forces massacred these same inhabitants. After seven years of terror he died in 1900, after the French had defeated him in the neighbourhood of Fort Lamy (N'Djamena).

The Germans had started crossing the region on expeditions in search of natural resources in the early 1890s. Because the Fulbe sultans in the more southern areas objected to their passing through their territory, fights took place. It was only in 1901 that the Germans really started to conquer the region. They tried to pacify the area and used violence against humans and the destruction of belongings as a means of achieving this. They did not interfere with the *lamibe* (Fulbe chiefs) except from giving them guns to consolidate (and in practice improve) their position[186], thereby allowing the Fulbe chiefs to continue dealing with the *Kirdi*[187]. It was only in 1913 that the Germans started to transfer some authority to non-Muslim chiefs in cases of ethnic resistance against Islamic chiefs.

The violence against the 'local' population continued during World War I. On the one hand these were war-related actions: different persons and ethnic groups were mobilised by allied forces or the Germans and had to fight for their 'friends', after which the losers were punished by the winners. On the other hand, in the later war years, the war was used as a pretext to conquer the last *Kirdi* groups in the mountains, who had never before been subdued.

This continued after the war when the French were in control. In addition, the French wanted to stop the aggression between the different groups, for example over wanted or raped women or over contested borders, the violent plundering of neighbouring villages, violent actions against (suspected) sorcerers, the existence of customs of specific ethnic groups of it

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[183] English expeditions crossed the region from the beginning of the 19th century onwards. It is from them that we have learned about the slave tributes, raids, trade and transports of different ethnic groups, as well as the pillage of villages, the burning of crops and the confiscation of cattle perpetrated by the different Fulbe chiefs.

[184] *"…il faudrait conquérir gay [*= household, RN*] par gay, jusqu'au dernier*".

[185] See Taïwé (2003).

[186] Van Beek (1989: 619): "…matters grew far worse for the local people after the installation of indirect rule."

[187] For an explanation of the term 'Kirdi', see next section and box 4.1.

being honourable to kill, the assassination of Fulbe authorities and the theft of their cattle on the basis of age-old hatred by non-Fulbe and because of tax-collections, etc. Ancient French colonial administration reports of 'expeditions' reveal a certain astonishment at the resistance offered by the indigenous population: *"Quoiqu'on en ait dit, c'est une fait que les Kirdis de ces régions montagneuses inexplorées continuent à vivre à l'état de guerre endémique et font fi de l'autorité"* (ANY, APA 11768/D in Beauvillain 1989).

Although the French administration imposed the rule of non-violent intervention in their pacification campaigns, those villages that had the reputation of terrorising their neighbours were severely punished: *"Les représailles administratives peuvent faire plus de victimes que les incidents eux-mêmes"* (Beauvillain 1989: 336). In cases of tax-collection, as well, the military basically used force to coerce the population to pay. Reversely, they encountered violent resistance from those *Kirdi* people who used pre-emptive defence. The use of the Fulbe chiefs as go-betweens in the French system and the fact that these chiefs continued with their slave trade activities, as well as their abuse of power until even after World War II, gave rise to many skirmishes, military reprisals by the French, etc. However, the involvement of Fulbe chiefs in cross-border thievery (Nigeria, Chad) was never punished by the French, although they were removed from their function if the practices became too obvious. However, not all regions were ruled indirectly by 'traditional chiefs'.

From the mid 1920s onward, several cantons were placed under direct administration because of failing legitimacy and growing abuse of power by the Fulbe chiefs, and thus a growing agitation among their subjects, the indigenous inhabitants who were referred to by the French and the Fulbe alike as 'pagan'. In these regions the French tried to install 'animist chiefdoms' with the aim being indirect rule which would avoid direct confrontations. Another reason was that they did not have enough civil servants. *"L'idée directrice est la suivante: pénétrer et pacifier le pays et rendre à la majorité païenne (93%) sa liberté vis-à-vis des envahiseurs Foulbé.*"(ANY, APA 11618, in Beauvillain 1989: 362). Because the French wanted the chiefs to comply with their administrative system, they overlooked the fact that most of the animist chiefs only had a moral-religious role. Once again, the traditional system was moulded into western ruling ideas: 'neo-traditionalism'[188].

Apart from military interventions the French also set up medical care facilities, helped to improve cultivation practices, built wells and established schools (mostly to provide for educated chiefs and civil servants). Because they only 'modernised' the more accessible areas, people were pulled out of the mountains and sometimes even pushed by forced resettlement.

Because the Fulbe elite did not 'give' their own sons to the 'whites', but forced the sons of their slaves to go to the 'white' schools, western education was synonymous with the emancipation of the non-Muslim groups. After independence, not much changed at first. President Ahidjo kept his Fulbe 'kin' in place as chiefs of the traditional Fulbe courts. Despite the fact that, in general, Fulbe education continued to lag behind, he also allocated them good positions in the national government[189]. Although he managed to incorporate the elite from other parts of the country as well, other ethnic groups from the north were still excluded. Yet, some of the *lamibe* who nowadays serve as official first degree administrative leaders are converted

[188] "European colonialism was carried out through the imposition of a hierarchy of 'traditional' chieftaincies, some created anew where there were none." (Ignatowski (2001: 39).

[189] See, for example, Gaillard (1994) or Mouiche (2000: 54-55).

autochthons who 'bought' their positions in a kind of election procedure. Indeed, most administrative posts in the Far North are nowadays occupied by non-Muslims[190].

Cultural differences and identity

Islamic influences and the invasion of the Fulbe in the 'Grand Nord' at the beginning of the 19th century initiated the development of a "northern Cameroon" identity. Until then, the area had been a multicultural melting pot of different ethnic groups, mostly related to each other via mutual ancestors, but with more emphasis on differences in culture than on similarities. The subsequent 'foreign' Empires with different centres that mostly left the autochthonous population in peace (after victory) did not try to bring together the various subjects, but they governed their territory from afar on the basis of regional (however vague and shifting) boundaries. This continued under the Fulbe reign. Yet, the overtone of the Fulbe hegemony and their political and administrative organisation of one Emirate covering the whole of Adamawa, constructed a regional political-economic realm *vis-à-vis* (this time) the rest of the Sokoto Caliphate of which it was part.

The building of precisely this region was based on geographical features that had for centuries promoted cross-cultural interactions. "In origin, river Benoué and its tributaries together with Lake Chad and the numerous rivers that drain into the lake provided the natural regional foundation" (Njeuma 2000: 3). It was the abundance of the grazing lands in this whole area that the Fulbe had sought when they first came to Cameroon, as dispersed groups of herders. With their wealth of cattle and the regional possibilities to maintain them, they transformed Adamawa into the richest of Sokoto's emirates.

Here, like more to the west, the Fulbe mixed the Islamic religious values and the hierarchical political organisation related to it (for example chiefs were also religious leaders) with their own "pulaaku" culture and concept[191], that was built on the possession of cattle and the resistance against "ecological and social insecurities inherent in the pastoral […] way of life in the Sahel" (De Bruijn and Van Dijk 1995: 193)[192]. In general, De Bruijn and Van Dijk say, "the religion of the Fulbe is an amalgam of [Fulbe] custom […] and Islam" (id). They included in their cultural religious complex all those individuals who wanted to acquire the same (socially elevating) opportunities and who therefore converted to Islam[193], the Fulbe overlords also did not hesitate to use "local knowledge and popular acclamation" (Njeuma 2000: 6) and to incorporate local leaders in their sub-regional councils. Yet, their efforts to "subdue all peoples in the geographical region equally" (Njeuma 2000: 7) while these had been used to unrestricted movements, and the Fulbe disdain of non-Islamics as 'barbarians' and *Kirdi* (see box 4.1) united those erstwhile so divided ethnic groups.

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[190] Prefects and sub-prefects are mostly from the South, where Christianity is more abound.

[191] See VerEecke (1999: 96-99) or Breedveld and De Bruijn (1996) on "Pulaaku", and Breedveld (1999) on Fulbe identity and sub-groups.

[192] See also Moritz (2003) on the mixing of Islamic religious notions and rules (for example on individual rights on property) with original Fulbe values, such as the family survival on the basis of common resources (cattle) as highest good.

[193] This is called "fulbeïsation". In those days it entailed an almost total change of culture. Fulbeïsation was also expressed as a general incorporation of Fulbe customs in habits of other ethnic groups (for example the Fulbe dress code, especially for chiefs). Nowadays, the term is almost totally restricted to Islamisation.

Box 4.1 The Term Kirdi

When the Fulbe first arrived in the north of Cameroon, just before the beginning of the 18th century, they had not yet (totally) converted to Islam. In those days they used to call the non-Fulbe "*haabe*" (sing. "*kaado*"), which means 'barbarians', 'those with a different, inferior culture'. Only after the start of the *jihad* did the Fulbe start to denounce all non-Islamic, non-Fulbe, groups using the *kanuri* word "*Kirdi*". Originally this term meant 'pagan'. According to Mohammadou (1984: 140) the term was brought by the French from Chad after the defeat of the Germans in 1914. Ignatowski (2001: 359) traces the origin of the term back to the Arabs (Kurds), and gives Rabah the honour of having introduced it for the Mandara Mountains inhabitants during his attempt to conquer the region. Anyway, the name soon became short for - in the eyes of the Fulbe - un-civilised and rebellious peoples. The European colonisers (German and French) first used the term with a same negative denotation, namely 'savage' and 'violent'. It was only after independence that the term acquired a more positive meaning being used by Cameroonian Catholic priests who were trying to mobilise the multitude of indigenous ethnic groups in the mountains on the basis of a shared interest *vis-à-vis* the ruling Muslim population. Schilder (1994): "Baba Simon redefined the pre-existing *kirdi* term into a positive social identity, generating self-esteem rather than feelings of inferiority". With the introduction of the multi-party system in Cameroon, the term *Kirdi* quickly acquired political overtones. In the same vein as the negritude movement of Senghor, 'kirditude' was instigated by the cultural-political movement in Yaoundé of northern non-Muslim elites: *Dynamique Culturelle Kirdi* (DCK).

Thus, although on the one hand the Fulbe managed to unite the north and to develop the identity feelings of belonging to the north of Cameroon, on the other hand they succeeded in binding the rest of the population together in a non-Fulbe, non-Muslim identity. Other Muslim groups such as the Mandara or the Kotoko were exceptions because they formed their own states, even before their Islamisation, and were not subdued by the Fulbe[194]. Neither did the Haussa and Shoa Arabs regard themselves as being from the same Muslim lineage as the Fulbe. The divide between the Muslim overlords and the rest was intensified by the way in which the colonial powers ruled and their preference for Islam as a "civilising" mission (Murffet 1964, in Njeuma 2000: 31) over the traditional religions. On the other hand, the Germans favoured the south with its geographical wealth over the north, therewith creating a regional dichotomy that emphasised again a northern versus a southern identity.

The dual identity of 'being a northerner', but at the same time 'being a Kirdi', that is 'not a Muslim' (heralded by Christian priests, see Box 4.1), continued during the French colonial period. Especially in the early French period, and again under Ahidjo, non-Arabic Muslims[195] were favoured politically and in the administration. This duality still persists today[196] despite the break up of the north into three different Provinces by president Biya who feared religious regionalism. However, it seems as if religion is not an important factor. Within ethnic groups, different numbers of people convert to Islam or Christianity[197] although a certain pattern can

[194] For the Mandara, see Boutrais (1984); for the Kotoko, see Van Est (1999).

[195] In contrast with the Shoa Arabs in the northern parts of the province, who the French feared would collaborate with people like Rabah (see the former sub-section) and form a pan-Arabic realm.

[196] See all the "open letters" to the President in various newspapers in Cameroon in 2003 and 2004 from the Northern elite who refer to their northern identity when they claim more investments and more State positions for the North.

[197] Different sub-groups can be found of both religions in the North of Cameroon (see, also, Seignobos and Nassouri

be distinguished per ethnic group. This only adds a third variable to the identity formation. However, the strongest loyalties still seem to lie in original ethnic values as well as the 'North Cameroonian' position. According to Njeuma (2000) the ethnic factor is predominant. With the emergence of the multi-party system, he recognises a development of "boundless political competition, especially ethnicisation of political ambitions" (id: 28).

However, the different ethnic groups are too small to form a threatening unity *vis-à-vis* the ruling party. Historically, the Far North can be separated into regions of ethnic groups that show cultural and organisational similarities, mostly born from the similarities in the physical surroundings and the historical patterns and economic ways of living that those physical surroundings have incurred. Thus, in general, the population of the province is divided into the ethnic groups from the mountains, the plains and the floodplain. More precisely, these regions are subdivided into the mountains proper and the high plateaux, the foothills, the plains more or less surrounding these foothills and the plain in the *bec-du-canard*, with the floodplain and the adjacent river band and its dwelling mounts during the inundations as the final area with adapted ethnic groups[198]. It has to be stressed that within such regions the diversity is also enormous (see Figure 4.5), both because the different groups each chose different survival options from the surrounding environment, and because a group always wanted to distinguish itself from another.

In general, the Kirdi groups are all quite 'egalitarian', although still more or less acephalous groups versus hierarchical organisations with a central chief can be found[199]. The first, the individualistic construction of society, is a way of living in the mountains and plateaux where the remoteness from other groups and the relative security from invasion rendered a one-person authority and a strong coherence unnecessary. In the plains, on the other hand, the pressure from invaders and the quick acceptance of strangers within the villages (both as refugees and as a result of the more wide-spread migratory habits) increased the threat to ethnic stability, whereupon members of the group started to stress their ethnicity and intensify the links to own rules and customs (socio-religious control). It is a normal pattern of creating we-they divides whenever physical and economic boundaries are less pronounced.

As a result, the different ethnic groups in the plains and along the river show great differences with regard to proneness to adopt modernisations, both in agriculture and in schooling, differences in the influence of land masters on allocation of land, in inheritance practices and, as has been mentioned, as regards the adoption of 'new' religions. Ways of dealing with violence also differ enormously. In some societies conflict is hushed up and violence is a taboo[200], in others ancient warrior heroes are constantly remembered in songs and narratives which urge the same

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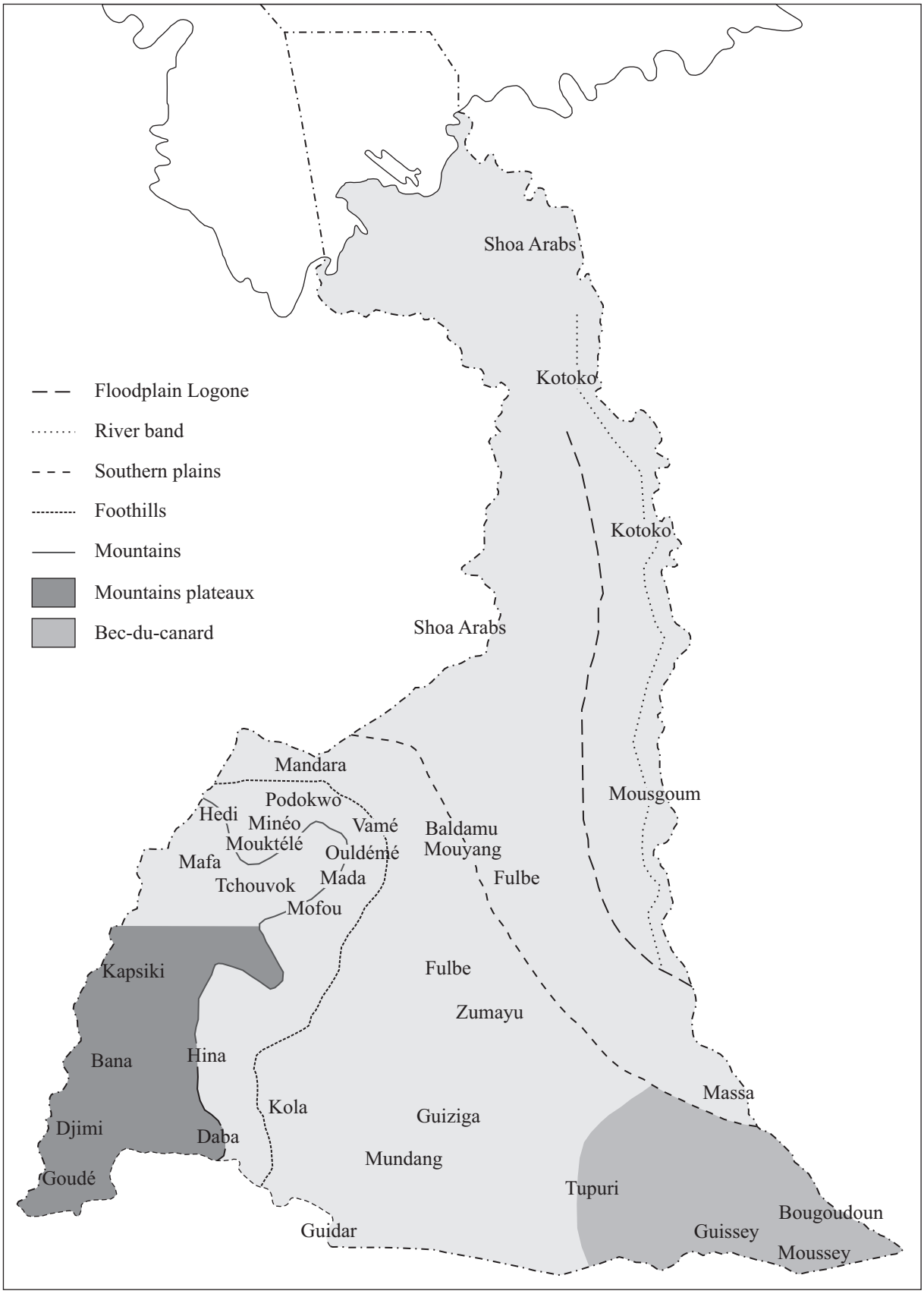
(2000)). The major divide in the Christian churches is that between Catholicism and Protestantism. But the lat ter is again made up of several church communities, such as Lutherans, Pentecost, Adventists, etc. Islam is adhered to in different forms, from very strict to more or less loose (for example the nomadic Fulbe, called M'bororo), and is varyingly influenced by ethnic customs. The form of Islam practised in the floodplain is more similar to that of the Arab world. Seignobos (2000c: 56) mentions that the new Islam converts in Maroua are more radical then the old Fulbe Muslims who "*donnent dans un intégrisme plus intellectuel avec le Wahabisme*."

198 See also Njomaha (2004: 41 and 49-50).

199 According to Anyangwe (1984: 30) neither of the two extremes can be found in Cameroon. With its historical high frequency of mutual contacts between different groups, the mutual exchange of habits has been such that every group has at least a kind of chief, and even highly centralised groups do not permit their chiefs to have total political and military power.

200 For example, the Hopi Indians in the United States or the Ayur Vedic tradition in India.

Figure 4.5 *Ethnic Diversity (impression)* (based on Beauvillain 1989; Meurs and Felix 2001; Seignobos 2000b)



fearlessness[201]. Such songs can be used by leaders - or mutually within groups - to engender a sphere of bravery and this can then lead to the use of violence[202].

Last but not least, the different groups also show great differences in engagement in political affairs. As a result of these differences, of the 'cross-cutting' religious conversions and of the existing North Cameroon identity, the above-mentioned ethnicisation of politics does not strictly follow ethnic boundaries[203]. Some groups with high political ambitions try to promote their own party, thereby transgressing group boundaries (e.g. the MDR[204] of the Tupuri[205]), but lots of own group members still (or again[206]) follow the lead of the RDPC[207]. On the other hand, the original "Fulbe-party", the UNDP[208], is seen by many, Fulbe and Kirdi alike, as the only way to break the dictatorial power of the RDPC. The stronger, southern opposition party SDF[209] has not (as yet) succeeded in binding followers in the north.

Therefore, depending on the wisdom of the next president (elections in October 2004) and his government, the North will act as a bloc *vis-à-vis* the rest of the country, the different ethnic and religious groups will oppose each other or a strong and self-confident but diverse North will serve as an enriching, constructive entity in the whole of the United Cameroon.

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[201] For example in the Zulu tradition.

[202] Conversely, different groups can have different reputations regarding their fierceness in conflicts. Generally, this is (also) based on past experiences or historical narratives, whether or not nurtured by the involved group. An example is the resistance of the Tupuri to the Fulbe that quickly gave them a majority position in the military ranks (Ignatowski 2001).

[203] In some cases it does, but then the 'before politics' period already revealed a problematic ethnic divide that is now used by certain leaders (see, e.g., Socpa (2002) or Onambele (1992) about the controversies between the Kotoko and Shoa Arabs in the Logone floodplain).

[204] *Mouvement Démocratique pour la Défense de la République*.

[205] However, Mouiche (2000: 66) states that "*le recrutements politiques du RDPC et de UNDP permettent de relativiser les clivages ethnico-religieux*", but the MDR is still a "*parti tribunitien Toupouri*".

[206] In the first multi-party elections in Cameroon (1992) the UNDP and MDR gained quite a lot of seats in parliament as a response to the economic malaise under the RDPC. Biya reacted with a policy of dividing the different groups of the North along ethnic lines (see Mouiche 2000). For example, he made the UNDP lose its 'Islamic' identity: based on the preference the Fulbe and Kotoko had acquired during the Ahidjo period, Haussa and Shoa Arabs could easily be persuaded to vote RDPC. Combined with fraud and intimidation during subsequent elections (Mouiche 2000: 73-83), and the inevitable fear of the Fulbe elite of losing their positions if they continued to follow the UNDP, the RDPC gained in numbers at each subsequent election.

[207] *Rassemblement Démocratique des Peuples Camerounais.*

[208] *Union Nationale pour la Démocratie et le Progrès.*

[209] Social Democratic Front.

5

Struggling for land in the Diamaré

The bush has totally gone!" That was the only thought that entered my mind when I saw the vast stretches of bare soil between Kolara and Kobo. Two years before, an extended savannah forest had covered this part of the Diamaré. Now the strip of dense trees and shrubs along the Kobo-Kolara road hides the evidence of the heavy clearance activities that have taken place more to the centre of the bush. The process is continuing in all directions.

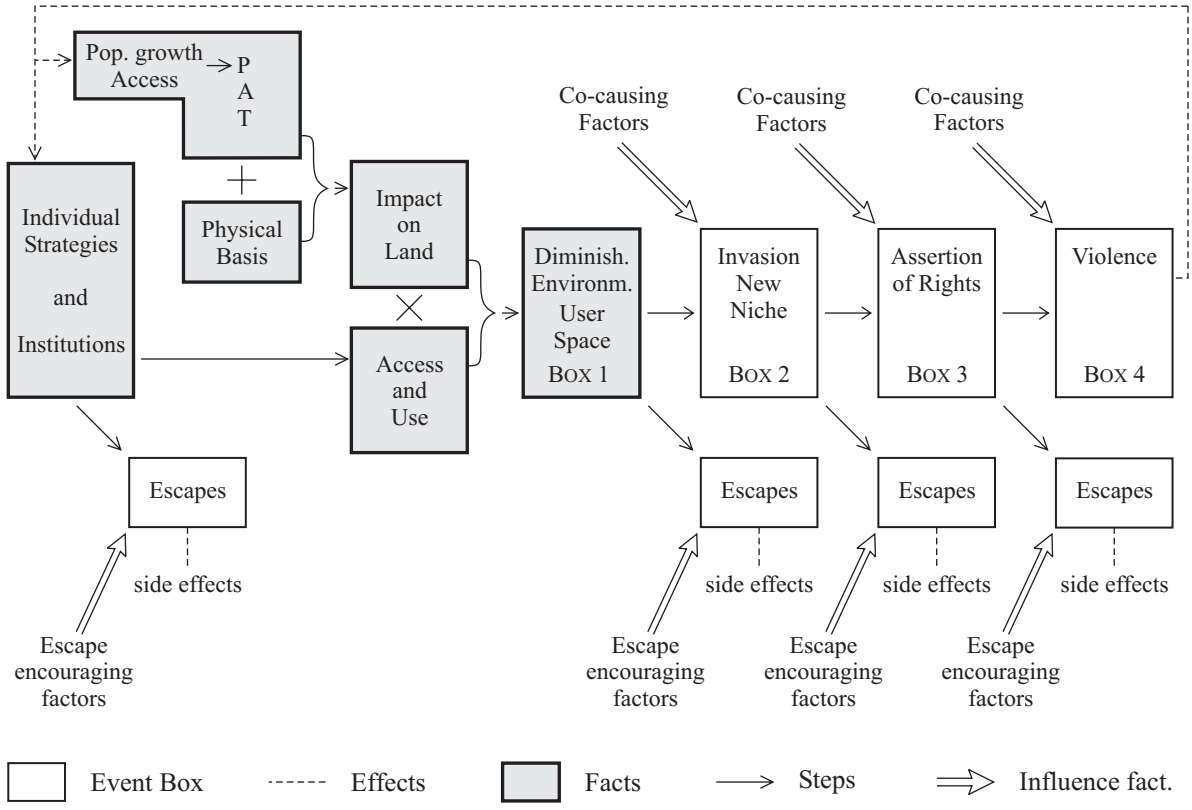
Since the beginning of the 1990s, the bush area south-east of Maroua has been invaded more and more often by cultivators who clear the bush and establish agricultural fields. For ages this area has been used by cattle keepers during the rainy season, when the dry season pastures of the Yaeré plain become flooded with the waters of the Logone River. Unfortunately, the use of the land by these two user groups coincides. However, as we have seen in chapter 2, different use of the same resource in the same space need not always lead to conflict. If the uses are complementary, different users can live together in the same space. In addition, when the bush is large enough and the pressure of users low enough, in reality the same space can be divided into parts that do not coincide. Growing population density means 'the space' is becoming more and more 'the same', competition is growing and therefore conflicts as well. Nowadays both parties regularly collide. Indeed, there are growing reports of violence used by the members of one group against the other[1]. Whether or not it is the diminishing space that causes violence remains to be seen.

In this chapter I focus on the explanation of this conflict, in accordance with the VoE model (Figure 5.1).After some historical information, I start investigating insecurities in the areas of origin of the invading group. In the third section I explore the different options to improve the situation. Then, I focus on the specific investment described in box 2 of the diagram: the intrusion of another niche. This can be divided into two parts: first, the move from the historical origin region to the Diamaré, and secondly - the focus of this study - the invasion from differ-

[1] See, e.g., Van der Ploeg (2001).

ent origin areas into the 'undisturbed' bush. In order to clarify the possible step to box 3 of the VoE diagram (the conflict situation) the insecurities, the options for overcoming these and the claims of the invading people are described in sections four and five. Subsequently, to pinpoint the conflict (box 3 of the diagram), the focus in section six is on the opposing party. In section seven I end this chapter with a description of options and motivations of both parties to resort to, or abstain from, violence (box 4 of the VoE diagram).

Figure 5.1 The VoE diagram



5.1 Background: History and culture of invading people

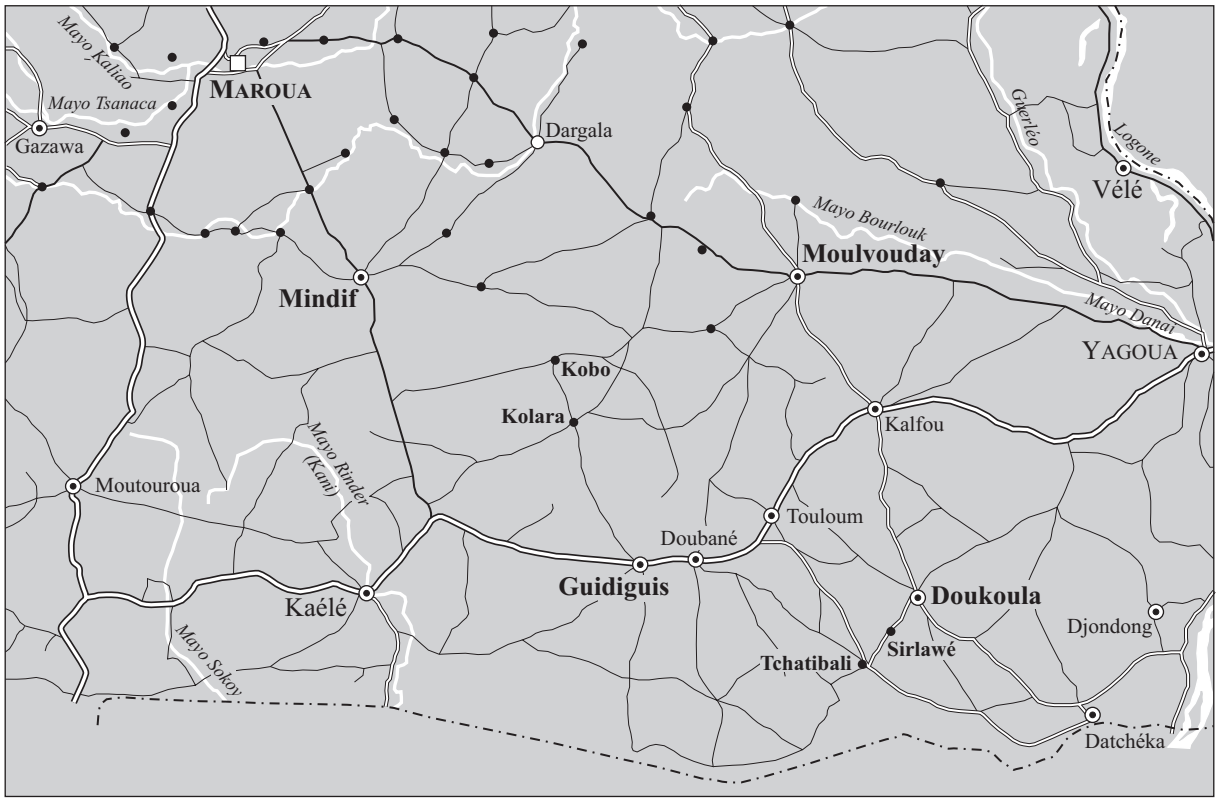
The area studied stretches over approximately 850 km^2 and is triangular with the southern edge at Guidiguis and the two outward points at Mindif and Moulvoudaye (Figure 5.2). In the middle of this bush zone the small neighbouring villages of Kolara and Kobo form the focus point for the research. These two villages are mainly inhabited by two ethnic groups: Fulbe and Tupuri. In the bush, which belongs to these two villages, new settlements have developed in recent years and are continuing to develop at a rapid pace.

While talking with the inhabitants of the new bush settlements it became clear that (almost) all of them belong to the Tupuri ethnic group. Their direct ancestors, they say, were inhabitants of

[2] Interviews showed that most people's grandfathers came from Chad, or the Tchatibali-Doukoula region (see section 4.1).

Tchatibali, Doukoula and neighbouring villages, as far north as Touloum[2]. This is a region that, together with the Fianga area just south of the Chad-border, is called "the heartland of the Tupuri" (Seignobos 2000b: 44).

Figure 5.2 Research Area



It is in the southern range of this heartland that the different Tupuri clans came together after centuries of migration (Figure 5.3). Three big clans are distinguished: from the North the Banre[3] (blacksmiths) arrived first. Later, from 1674 onwards, the settlement in the Fianga-Tikem region was completed by the Dore who, like the Guwa (meaning "the rest": including clans that arrived before and after the Dore), came from the Peffe area near lake Lere in the south. During their southward move, some of the Banre travelled more westward and set up a stronghold in Moulvoudaye[4].

In the period during which the pre-Tupuri left the Peffe region, new ways of land use and habitation patterns were adopted (among other things, the abandoning of fortress-villages). The integration of different cultural practices (with regard to institutions, myths, rituals, religion and material culture) of the different groups on the one hand and the crystallisation of complexes of new ones on the other resulted in the emergence of an ethnic identity of both Tupuri and others. One of the important habits that Tupuri adopted, in addition to their cul-

[3] Nowadays, the name Banre is used by Tupuri to indicate the Masa in the Logone region, whose ancestors also come from the land between Logone and Chari (Seignobos and Tourneux 2001: 7-8).

[4] Moulvoudaye remained one of the northernmost Tupuri concentrations during the Fulbe hegemony in the north-west.

tivation, was the living with cattle[5] and the ritual of the *gurna* (milk cure)[6]. From that moment onwards Tupuri were an agro-pastoral group, with a lot of knowledge of, and feeling for, cattle[7].

The arrival of the Dore at Lake Fianga's borders coincided with the installation of central chieftaincies that influenced the surrounding countryside. The new socio-political organisation made the large-group movements further northwards possible, because it increased cohesion and brought former powers together. Dense settlements came into being in sheltered places at the foot of the massifs and in wetland zones like Lake Guissey and Fianga or the borders of Guerléo River (see Fig. 5.3). Subsequently, the migrants went as far north as Midjivin, Moutouroua, Maroua, and even Kalioa. Soon, the Dore themselves started colonies in Dziguilao, Touloum, Tchatibali and even Guidiguis. It is said that, where they arrived, autochthonous populations acknowledged the Dore authority and accepted the chiefs appointed by them. From the Banre village of Moulvoudaye, further expansion to the west and north-west was easy.

Although it is difficult to trace back the origins of all different ethnic groups and clans, because of age-old mutual influence, manipulations and mixtures, it can be concluded that Tupuri were already present in the Diamaré plain long before the Fulbe conquest of that area. After the Fulbe defeat of the Zumaya kingdom, some of its citizens found refuge in the Tupuri realm more to the east, although in time they disturbed the Tupuri with their slave and commodity raids. The Fianga-and Doukoula-region has always remained free of foreign invaders. Fulbe raids did not extend that far because of fierce resistance of the Tupuri.

Because of the habit of concentrating people in centres - although the villages as such consist(ed) of dispersed houses - Tupuri were used to living in situations with a high population pressure on the land. They therefore adopted a way of life based on a diversity of economic possibilities[8]. At the same time, in contrast to their neighbours, they were and are willing to exploit different and even difficult soils by paying them a lot of attention and care. As is shown by their early use of fermented beer[9], Tupuri cultivated cereals in an early era. They have a lot of different sorghum varieties at their disposal that each fit the different soil types they toil. Their use of the transplant-sorghum *babu* means they were easily able to incorporate the dry season Kanuri and Fulbe based *muskuaari* sorghum. On the other hand, finger millet is used far less

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5 This was adopted from the Masa, with which group Tupuri still share many similar cultural habits.

6 See Ignatowski (2001: 5-6): the milk cure stands for the period in which young men are occupied with the care of cattle in a camp in the outskirts of the village. During the day they herd the animals. When they return they drink a special milk-sorghum porridge which is intended to increase body fat, which itself is seen as a sign of beauty and wealth. "Gurna is a dance society", "it has been the main avenue for young men and women to learn local history, to enter into sanctioned sexual relations [at the end of each day the girls arrive in the camp and are offered the porridge], and to find marriage partners." It forms life-long friendships and, one of the more important aspects, there the burial songs and dances are learned.

7 Seignobos (2000e: 116): "*L'obligation de posséder du betail est, chez les Tupuri primordiale*." He also mentions (p. 115) the existence of special Tupuri cattle (also called "the cattle of the Logone"), kept by Tupuri, Musgum and Masa. It has a *Bos taurus* origin. After decades of interbreeding with Zébu, nowadays it has the appearance of a small Zébu, but with different characteristics according to fattening and calving. The zebu with which Tupuri mixed their smaller cattle came from the Fulbe. When I asked Tupuri about their 'own' cattle breed, they said: "How can we have a separate breed? We used to steal our cattle from the Fulbe, didn't we?"

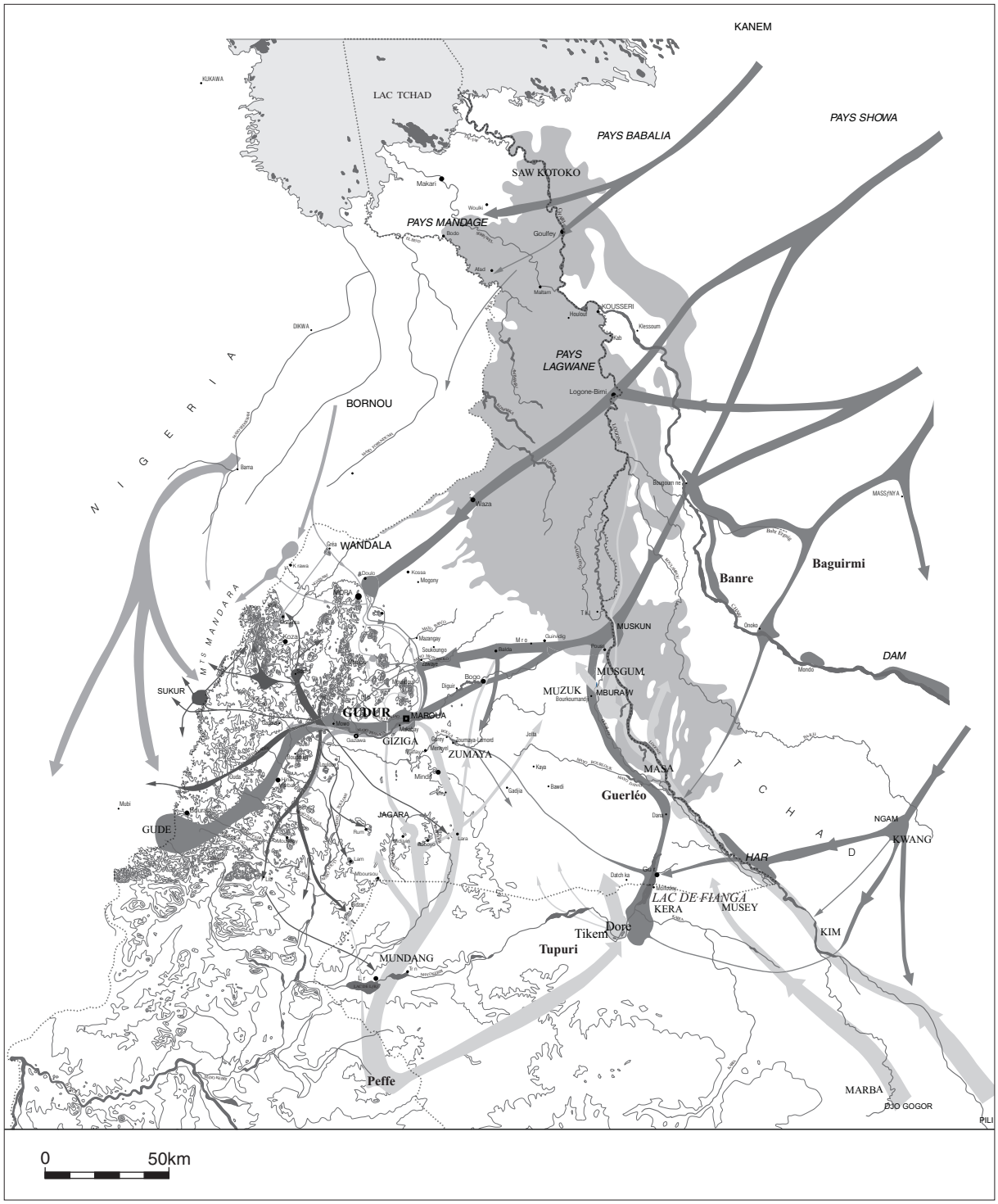
8 Seignobos (2000d: 63) attributes the capacity of Tupuri to survive in densely populated areas to their combined use of rain-fed agriculture, transplant sorghum in the first half of the dry season and sedentary cattle-keeping.

9 It is said that Tupuri imported the recipe of brewing sorghum beer to the Fianga region. (Seignobos and Tourneux 2001). See also Feckoua (2002) about the origin myths of the Doré chiefs and the brewing of beer.

10 In some clans the land master uses babu-plants for rituals as well, for example to predict his (future) position.

and mostly only for ritual purposes[10]. Another aspect of their propensity to invest a lot in their land is the care for and maintenance of trees, such as *Calcedra* and *Faidherbia.* Their 'heart-land' is famous for the extended *Faidherbia* parks. However, the ever-growing population and the subsequent rise in land and fuel-wood demands nowadays lead to difficult trade-offs between the maintenance of trees and direct survival.

Figure 5.3 *Migration patterns* (source: Seignobos 2000b: 45)



5.2 Insecurities: Box 1 and onwards

This section will start on the left-hand side of the VoE diagram (Fig. 5.1) with a description of Box 1, the diminishing environmental space (scarcity) for Tupuri. The step from Box 1 to Box 2 is not only caused by environmental insecurities. It is a complex of personal, socio-political, economic and environmental factors and insecurities[11] that shape the strategies of Tupuri. These are the influencing factors, mentioned in the diagram, that determine whether or not the actors will enter into Box 2 or use an 'escape' route.

So, after a description of the environmental situation, I then assess the other (possible) insecurities of Tupuri, in the human, economic and social domains.

5.2.1 Environmental insecurities

Physical basis

Soils

As indicated above, the Tupuri heartland consists of a diversity of soil types that are all used by the Tupuri inhabitants. They have experimented with different sorghum types in different soils and with their limited means they have reached the summit of possible production levels. Some of the soils are rich and weather at a pace that more or less maintains fertility. At other locations the soil is quickly exhausted. In general, the Tupuri heartland is a flat countryside covered by alluvial soils that alternate between sand dunes (in a north-west to south-east direction) and argyle-sandy depressions. Both types of soil are acid and poor in organic material and minerals. The best soils can be found at the edge of the depressions, where more organic matter is present, but here fertility is still not high (Hallaire 1984: 389). The Tupuri used to enrich these soils with animal dung. The use of chemical fertilisers for cotton production does not help in the long run as it disturbs a well-balanced proportionality of organic matter, diverse physical particles and chemical components.

Some soils have such a texture and composition that water does not easily penetrate, leading to surface run-off and soil which is too dry for agriculture. At the bottom of the depressions this type of soil leads to puddles that hold water too long for plants to survive, or even to complete inundations. People affected by this inconvenience tend to dream about big, state-driven civil works of dyke and canal construction. When speaking about erosion, half of the respondents come up with an explanation of standing water that makes it impossible to cultivate millet or rain-fed sorghum. Although it is ideal for transplant-sorghum, most people in the heartlands are culturally attached to the 'red sorghum' as their daily meal and cannot make do with only the white or yellow transplant-sorghum.

Climate

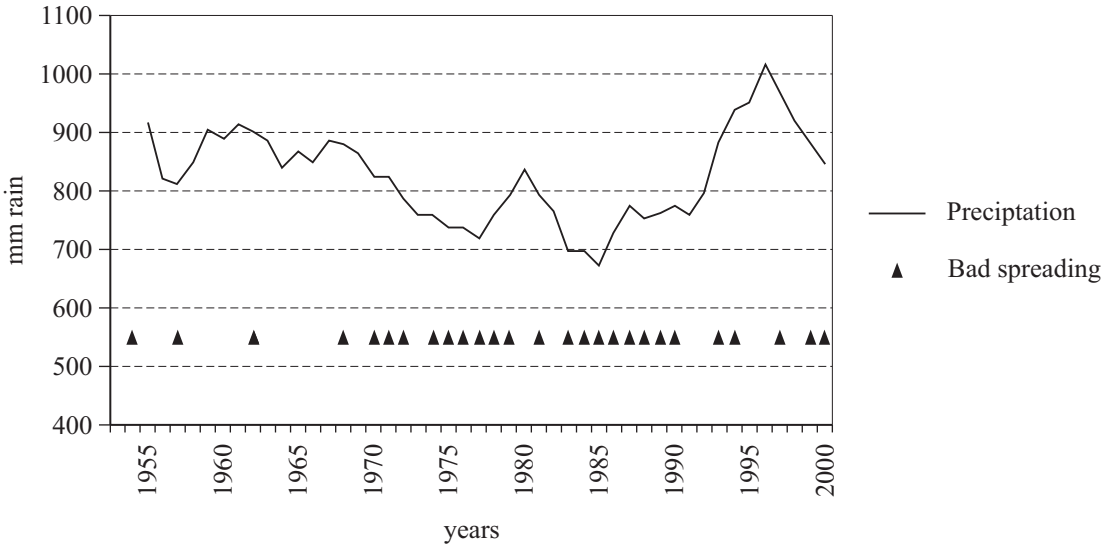
Another basic feature is the rainfall pattern. The whole heartland lies in the climatologic band that receives between 750 and 900 mm of rain per year. One of the research villages in the heartland was Tchatibali, where the SODECOTON factory has its own pluviometric station. The other village is Sirlawé, exactly between Tchatibali and Doukoula (somewhat more to the north) that also has a SODECOTON pluviometric station (see Fig. 5.2). Doukoula, for exam-

[11] See chapters 2 and 3.

ple, had a mean between 1945 and 1969 of 870 mm per year and between 1970 and 1995 this was 780 mm per year (L'Hote 2000: 19). The low second figure is basically due to the droughts in the 1970s and 1980s that struck the whole Sahelian region. In Doukoula the decennial mean figures at that time were 753.5 and 773.5 respectively (Beauvillain 1995: 64). For both pluviometric stations, precipitation over the last five years of the 1990s is depicted in the Appendix, in Tables 5 and 6.

The last five years of the 90s produced more promising figures, with a mean of 1019 mm in Tchatibali and 956.5 mm in Doukoula per year. It has to be said, however, that differences over the years can be considerable (see Fig. 5.4). In 2000, for example, total rainfall numbers were well below 700 mm in the whole region and only in two months was rainfall greater than 100 mm.

Figure 5.4 *Mobile average precipitation over 5 years in Doukoula plus years with bad rain distribution for agriculture* (a dot means that in that year the rainy season was shorter than 5 months and/or that there were fewer than 4 consecutive months with more than 100 mm of rain) (Source: Beauvillain (1995) and SODECOTON Pluviometric station Doukoula, year reports SODECOTON and archives[12])



Indeed, trust in the reliability of rain has diminished: during the rainy season of 2001, which started badly, more than 60 % of the respondents referred to a deterioration in rainfall since their own or their parents' youth. A large proportion of the population thinks the rains are too variable[13]. "Some years there is no rain at all, other years there is too much[14]. The variation is excessive even during the year: today your small plants suffer with their roots and stems drowned and tomorrow they are thirsty. A generation ago it was better. When my father was young he could depend on the rain."[15]

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[12] For 1998 and 2001-2002 the Tchatibali data has been used because of a gap in the Doukoula data. The ten year mean has been used for 1963, for which there is no data.

[13] 64 % of the 123 respondents thinks the precipitation either too low or too high over the different years.

[14] For example, in 1996, both Tchatibali and Doukoula suffered from flooding.

[15] After a lack of rain in 2002 (year total of 687 mm in Tchatibali), the year 2003 was again too wet (in Tchatibali region with a year total of 1,100 mm over almost seven months, although there was not much in May). Many farmers suffered from flooding and therefore a loss of crops.

Population density

While facing these circumstances of different soils and various rainfall patterns, Tupuri have always gathered in population centres as a political and strategic method. There they achieved high birth rates and then went on to invade the surrounding areas. Between 1948 and 1951, a high emigration flux of around 10.5 % of the population per year matched the high birth surplus of 2,298 births minus 807 deaths (Beauvillain 1989: 491).

Table 5.2.1 *Population densities over the years* (in persons per km^2)

	1940	1958	1980	1997	2000
Kar Hay sub-department	25 - 40[a]	60[b]	100 (range 1-200)[c]	n.av.	235[d]
Diamaré plain	10 - 25[e]	n.av.	25 - 40[e]	n.av.	50 - 60[f]
Kobo	n.av.	n.av.	4 (0-9)[e]	7 (1 - 25)[f]	> 10[g]
Kolara	n.av.	n.av.	10 (0-50)[e]	30 (8-100)[f]	> 40[g]

[a] = Source: Beauvillain (1989: 491) over Doukoula district
[b] = Source: Guillard (1958: 415) for Yagoua sub-department (i.e. Doukoula, Tchatibali and Datchéka districts)
[c] = Source: Beauvillain (1989: 497-501) and Seignobos (2000d: 63). Apart from almost empty strips, towns like Doukoula, Tchatibali and Datchéka have a very high population density
[d] = Source: MIDIMA, January 2003
[e] = Source: Beauvillain (1989: 497; carte hors texte)
[f] = Data on the sub-department Moulvoudaye, home of Kolara and Kobo. Source: Seignobos (2000d: 63)
[g] = estimated (based on increase of new settlements, own observations)

Between 1968 and 1984 the population increase in the Tupuri heartland was also only 1% per year due to a high level of out-migration[16]. Between 1987 and 2001, another picture emerged: the population of the whole Kar Hay sub-department increased from 71,985 to 116,006 which is an increase of more than 60 %.

For generations now, the population growth in the Tupuri heartland has been below the national average (2.3 % in 2001) and even further below the Far North Province average (3%)[17]. This is partly due to high out-migration figures. At the moment, the population density of Tchatibali, the town, is higher than that of Sirlawé, the village (centre Tchatibali: 6828 inhabitants on 100 km^2 (= 85/km^2); Sirlawé has 2,386 inhabitants in an area of 40 km^2 (= 60/km^2)).

For Kolara and Kobo sub-districts, the population increases between 1968 and 1987 were 2% and 0% respectively. Even in 1997, the population density was very low (see Table 5.2.1). I assume that the density in Kobo sub-district has increased particularly quickly after 1997 due to the new settlements in the Kobo bush. Although the surface of the involved village areas is known (200 km^2 for Kolara and 55 km^2 for Kobo) it is difficult to determine the population density of the two villages. Because of the difference in concentrations of people in the centres and emptiness of the bush, a village average does not mean anything either. The numbers

[16] Sometimes the out-migration was spontaneous, at other times it was inflicted by institutionally organised resettlements, such as those of the SODECOTON (to enhance cotton production) to the Benoué region (see also Zuiderwijk (1998)).

[17] Based on Seignobos (2000d: 63): between 1976 and 1995, the growth increased each year, from around 2.5% initially to 5% later on.

shown are based on settled people. If cattle nomads were also counted, population densities would differ tremendously over the year.

Additional information on population growth for the research villages can be found in household composition data based on the interviews taken in May-June 2001. This data is shown in Table 5.2.2.

Table 5.2.2 Mean number of children and wives per household, over the generations[18]

	Child. of respon-dents[a]	n of respon-dents	Child. of resp. > 50 years	n of respon-dents > 50	Wives of respon-dents	Child. of fathers of respon-dents	n of fathers[e]	Wives of fathers	Child. of grand-fathers[d]	n of grand-fathers[e]	Wives of grand-fathers
Sirlawé	3.3+3.4[b]	68	9.8	29	1.7	12	67+60	2.9	13	54+49	3.1
Tchatibali	3.3+2.7[c]	87	8.3	38	1.6	11.8	85+84	2.9	11.8	7 +76	3.8
Kolara[f, b]	3.8+4.1	37	13.2	17	1.6	11.7	36+36	2.6	8.6	35+34	2.6

[a] = first number given is sons, second is daughters
[b] = this number will increase in the near future because half of the households are not yet fully grown[19]
[c] = this number will increase in the near future because 56 % of households are not yet fully grown.
[d] = these numbers are conservative, because respondents only count uncles and aunts they know.
[e] = first number given relates to sons of father or grandfather, second number relates to daughters thereof (for example, 67 + 60 means: 67 of respondents know something about the sons of their fathers and 60 know something about daughters of the fathers.)
[f] = this is data for the Tupuri neighbourhoods studied in Kolara village

In reality it is very probable that the number of children per grandfather was higher[20]. That would give weight to the idea that the total numbers of children per household head diminish over the generations. Whether or not this is due to better healthcare, more education for girls, increased population pressure, greater use of contraceptives or other reasons, is outside the scope of the research. Only Kolara reveals a different picture if we examine the number of children of respondents older then 50 years, but the 'n' is very low and the number of children per grandfather is probably far too low[21].

In short, population densities in the heartland are high, those of the Diamaré villages are high in the inhabited centres, but low when the surrounding bush is also included in the calculations.

Land availability

In all three villages land availability diminished over the generations (see Table 5.2.3). Although the figures of the different generations do not always cover the same area (as Tupuri

[18] Children that died before their 5th year are not counted, except for children currently in that age group.
[19] If the father of the house is under 50 years of age the family is considered to be not fully grown.
[20] Respondents do not know all their aunts, because these have married 'away'. That less is known about the number of aunts than the number of uncles is also revealed by the lower numbers of children in the case of grandfathers, caused by more "I don't knows" when asked about number of aunts. If this is the true explanation, then the real number of children of grandfathers is higher, especially due to a higher than acknowledged amount of grandfathers' daughters.
[21] Probably, respondents mention less than half the number of aunts that existed (97 aunts versus 195 uncles).

tend to migrate a lot[22]), it does represent the trend of diminishing possibilities. In addition to this decline over the generations, the table shows the lesser land availability in the heartland compared to Kolara. There in the town of Tchatibali, people have the lowest amount of surface area available for agriculture.

Table 5.2.3 *Mean surface of arable land (in ha) per household in three origin villages*; divided per generation and ownership ('own') and cropped (= 'used') or fallow[23]

	Kolara	Sirlawé	Tchatibali
Respondent (own.)	3.83	2.65	2.03
Father (own)	4.75 (or more)	5.75	5.45
Grandfather (own)	3.23 (probably more)[b]	9.0	7.33
Respondent (used)[a]	1.78 and 2.50	2.33 and 2.83	1.55 and 1.48
Respondent (fallow)[a]	0.85 and 1.78	0.30 and 0.25	0.38 and 0.45[c]

[a] = first number is for 1999, the second for 2000.
[b] = of the 37 respondents, 15 did not know the amount of ha of grandfathers and 10 only said that their grandfather had "a lot of fields". Conservatively counting "a lot" as the mean figure of the respondents themselves (= 15.3) means that the mean for grandfathers would rise to 14
[c] = for Kolara the higher amount of fallow in 2000 was not due to fallow rotation to improve field fertility but has to be attributed to the lack of rain at the end of the rainy season that made the cultivation of transplant sorghum impossible.
NB the difference between 'total owned' by respondents and what they say they have cropped plus left-over fallow is due to the fact that all given numbers are estimates.

In all three villages a mean household can more or less dispose of the necessary 0.25 ha per person[24], although in Tchatibali this amount is only just met. In addition, differences between households are large (see Table 5.2.4).

Table 5.2.4 *Surface of land per person (source: fieldwork 2001)*

	Mean number of persons per household	Arable surface per household (ha)	Mean surface per person (ha)	Range of surface per person (ha)	Number of households with < 0.25 ha per person
Sirlawé	9.4	2.65	0.28	0 - 1	23 (46%)
Tchatibali	8.6	2.03	0.24	0 - 2	49 (56%)
Kolara	10.5	3.83	0.36	0.13 - 6	5 (14%)

In the heartland, more than half of the households suffer from insufficient land surface. The amount of fallow land needed to restore used fields, differs depending on soil type and the fertility restoration pace. However, more households than those that do not have enough surface area are unable to use the age-old fallow system any more.

In the three origin villages 4 % of respondents do not dispose of any own fields (2 of them are not primarily farmer) with the highest number being in Tchatibali.

[22] See section 5.1.
[23] Source: fieldwork May-July 2001.

Land commoditisation

Obtaining extra space in addition to one's own fields is becoming more difficult. In this respect, the insecurity for the poor in particular is growing. The increasing pressure on the land theoretically leads to increases in its monetary value with free loans being less frequently available. Tchatibali inhabitants in particular do not loan out their fields any longer. At least 10 % of the respondents explained that their fathers (from time to time) used borrowed fields. For percentages of the current population that hire or borrow fields, see Table 5.2.5.

Table 5.2.5 *Percentages of respondents hiring (plus prices) or borrowing fields* (because people mostly do not hire or borrow whole hectares, the table shows the prices per quart, which farmers call 'a plot')

	% of respondents hiring fields	Prices for hiring (in Fcfa / qu)	% of respondents borrowing fields	% of respondents that bought fields
Sirlawé	20	2 - 5000	9	0
Tchatibali	14	3 - 7000[a]	5	0
Kolara	2	4000	16	0

[a] = this is the range, but mostly the price is 5 – 6000 Fcfa / quart.

It was impossible to ascertain whether or not the price of hiring a plot is higher now than in the past.

Differences between rich and poor people increase as those with more fields have the opportunity to make money out of the situation and the poor do not have the opportunity to acquire additional land. Poor people in the Tupuri heartland expressed their current uneasiness regarding the possibilities of accessing other people's fallow land in the event that they had no other opportunities. "I cannot afford to pay for a field. In the past I could use some of my uncle's or neighbour's quarts, but I think they will charge me to do so in a couple of years", is a statement often heard.

Thus, although a real land market has not (yet) developed[25], (poor) inhabitants feel a rising insecurity.

Calorific needs and production

Amount of production

Production figures of both the heartland as well as Kolara village are based on fieldwork surveys (May – July 2001). Because respondents are household heads, the figures given in tables 5.2.6 are also the production figures per household. No official records have been included because neither agricultural services nor SODECOTON have village or neighbourhood figures available[26].

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[24] Dietz *et al* (2001).

[25] Platteau (1996: 69) explains that "the notion of land as a (freely tradable) commodity remains deeply alien to most African people", because of the high emotional and cultural value attached to land. Thus, the amount of commoditisation may be an indicator of land scarcity, but it should not be compared with other geographical areas.

[26] According to the respondents, the years just before 1999 and 2000 were better because of the better rains, but people do not remember the exact amounts.

Table 5.2.6a *Production and used surface of respondents of Sirlawé in 1999 and 2000* (NB. 'n.a.' means 'not applicable')

	1999 (n = 51)			2000 (n = 56)		
	Mean prod./ resp. (kg)	Mean surf./ resp. (ha)	Prod/ surf. (kg / ha)	Mean prod./ resp (kg)	Mean surf./ resp. (ha)	Prod./surf. (kg / ha)
Cotton	430.9	0.52	838	720.4	0.70	1031
Rain-fed sorghum	952.9	0.93	1020	957.1	0.98	973
Transplantsorghum	271.6	0.58	467	151.8	0.53	287
Maize	539.2	0.04	1291	61.6	0.06	950
Rice	0	0.00	0	0	0.01	0
Groundnut	35.7	0.10	343	57.6	0.10	600
Beans	79.2	0.17	474	72.3	0.23	318
Other[a]	119.6	0.20	610	103.8	0.20	528
Total	n.a.	2.5	n.a.	n.a.	2.8	n.a.
Fallow	n.a.	0.32	n.a.	n.a.	0.27	n.a.
All cereals	1278.4	1.56	820	1170.5	1.58	739

Table 5.2.6b *Production and used surface of respondents of Tchatibali in 1999 and 2000*

	1999 (n = 87)			2000 (n = 87)		
	Mean prod./ resp. (kg)	Mean surf./ resp. (ha)	Prod/ surf. (kg / ha)	Mean prod./ resp (kg)	Mean surf./ resp. (ha)	Prod./surf. (kg / ha)
Cotton	62.9	0.15	421	45.4	0.07	631
Rain-fed sorghum	623	0.95	659	609	0.86	707
Transplant sorghum	139.7	0.26	528	137	0.30	458
Maize	2.3	0.00	800	17.2	0.01	1389
Rice	25.4	0.07	368	9.8	0.12	85
Groundnut	8.6	0.17	577	3.5	0.01	240
Beans	45.8	0.08	569	43.8	0.09	516
Other[a]	9.0	0.02	390	3.6	0.01	270
Total	n.a.	1.7	n.a.	n.a.	1.5	n.a.
Fallow	n.a.	0.37	n.a.	n.a.	0.21	n.a.
All cereals	790.3	1.28	617	774	1.29	601

Table 5.2.6c *Production and used surface of respondents of Kolara in 1999 and 2000*

	1999 (n = 37)			2000 (n = 37)		
	Mean prod./ resp. (kg)	Mean surf./ resp. (ha)	Prod/ surf. (kg / ha)	Mean prod./ resp (kg)	Mean surf./ resp. (ha)	Prod./surf. (kg / ha)
Cotton	187.7	0.3	628	199	4.04	611
Rain-fed sorghum	1125	1.0	959	989	1.09	856
Transplant sorghum	1264	0.97	1124	61.4	0.07	782
Maize	2.19	0.01	350	5.9	0.09	786
Rice	0	0	n.a.	0	0	n.a.
Groundnut	7	0.01	120	4.1	0.24	171
Beans	63.5	0.13	480	57.3	0.14	400
Other[a]	8.6	0.01	842	5.4	0.13	526
Total	n.a.	4.4	n.a.	n.a.	1.9	n.a.
Fallow	n.a.	0.83	n.a.	n.a.	1.72	n.a.
All cereals	2392	2.0	554	1056	1.24	807

[a] = with 'other' is meant crops like Bambara groundnuts, fournion, etc.; potatoes, yams, manioc or fruit from trees

is not counted, because of the difficulty of expressing both the yield in kg or the used surface in ha. In general only a very small proportion of the population cultivates these crops on a very small area.

In all three origin villages and over both years the crops show lower yields per ha than the 1988-1989 means for North Cameroon or the Diamaré as such[27]. The amount of maize production differs a lot over the years, but is mostly higher than what Ali *et al* (1997) found for the whole of North Cameroon. Surprisingly, in Sirlawé and in Tchatibali, a very high production was achieved in two different years[28]. The tables do not show a trend between 1999 and 2000 of lower or higher production, except for the cereals. These had a very low production in 2000 due to the extremely low precipitation. Over all three villages, production levels stayed way below the figures of De Steenhuijsen Piters (1995, see note 27). An obvious difference between the three villages cannot be discerned.

In the eyes of ordinary people yields are declining. Almost all respondents complained about the difficulties of obtaining enough food from their own fields. They refer to their fathers who, in their time, easily survived on the products from their own fields. Both the total arable surface area per household and the production per ha was better then. "And", many respondents remark, "When they did not have enough space, they migrated to new and especially fertile fields. In those days, such fields were easy to find".

Needs

Although energy needs differ over the year with differences in the amount of work per season (see Chapter 3), for the sake of simplicity we use a simple sum to illustrate the extent to which in all three origin areas calorific needs are met over the year.

Table 5.2.7 *Cereals needs and production per mean household in the three villages* (in kg), according to the perception of the respondents and to the calculation of the FAO[29]

	Sirlawé			Tchatibali			Kolara		
	Needed	Produced		Needed	Produced		Needed	Produced	
		1999	2000		1999	2000		1999	2000
According to respondents	825	1278	1171	1250	790	774	1830	2392	1056
Acc. to FAO calculations	1984	n.a.	n.a.	1827	n.a.	n.a.	2178	n.a.	n.a.

[27] Ali, Peters and Fozein (11997) describe a year-production in the North of Cameroon of

sorghum	1130 kg/ha
maize	740 kg/ha
groundnuts	820 kg/ha
beans	670 kg/ha

Their figures are those of 1988-1989, published in the regional analysis (1995) of SNV (a Dutch development NGO, that works in Cameroon). FAO statistics has counted a mean production for the whole of Cameroon during the 1990s of 869 kg/ha for sorghum, 1745 kg/ha for maize, 407 kg/ha for groundnuts and 838 kg/ha for beans. During the first years of the new century, production levels were higher: the means for 2000-2003 were 1201 kg/ha for sorghum, 2404 kg/ha for maize, 1076 kg/ha for groundnuts and 848 kg/ha for beans. However, the whole of Cameroon is too big and too diverse, both climatically and with regard to soils, to make those figures adequate (maize, for example, does produce very well in the southern regions as compared to the dry north). According to De Steenhuijsen Piters (1995), sorghum yield in the early 1990s in the Diamaré was 1600-2500 kg/ha.

[28] It is not possible to draw any conclusion because the total surface area cropped with maize was so low and the work was carried out by so few people.

[29] According to the FAO (FAO/WHO/UNU 1985) norms, the calorific need is 2500 kcal/adult (2300/woman and 2800/man) and 1670 kcal/per child per day (the latter is my own rough summation of different age-group necessities); 1 kg cereals contains 3342 kcal (3000-3600 kcal).

Table 5.2.7 shows that the perception of the inhabitants of the amount of cereals needed per year is lower than that indicated by FAO figures. This is due to the fact that the FAO figures shown are based on a diet of only cereals in order to meet calorific needs. As can be seen in Table 5.2.6, other crops are cultivated as well. It is not surprising that, on average, Tchatibali (the place with the lower arable surface area per household, a small number of cattle and a town-like attitude) reports a cereal need that compares more with that of the FAO figures. However, the fact that Kolara's perceptions about needs compare even more significantly with those of FAO is a miracle.

Nevertheless, when the amount of calories produced in the total of the crops is compared with the (FAO-calculated) needs, a general shortage in all three villages can be seen (Table 5.2.8).

Table 5.2.8 Comparison of calorific needs and calorific production from agriculture per (mean) household per year

	Kcal needed	Kcal produced 1999	Kcal produced 2000
Sirlawé	6 547,735	5 083,082	4 768,129
Tchatibali	6 029,800	2 868,024	2 734,667
Kolara	7 187,945	3 861,636	3 514,253

Although, from time to time, Tupuri eat some meat or fish, cattle keepers and their family members drink milk and everybody tries to gather some bush products in the pasture areas[30], the low calorific values in Tchatibali and Kolara in particular make one wonder about the food status of the inhabitants of these villages.

Indeed, Table 5.2.7 also shows that only Sirlawé managed to produce enough kg of cereals (according to respondents own perception on needs) over the two years. Tchatibali in particular was confronted by a considerable shortage. Two years of shortage in a row means that none of last year's stock can be used. In the villages, shortages can be even more disastrous for some people because of the uneven distribution of production and needs (see also Table 5.2.9).

All the places of origin of the Tupuri regularly need external aid to supplement their food requirements. Government aid (flour) was provided in the heartland in 2000 and 2001. In 2001, the Kolara area also received much needed flour from the government[31]. However, most of the time, this aid does not meet the need per household and does not reach the households that are most in need (see also note 31). People are embittered. They say, "In former times, we normally had some millet left from other years to help us through the '*soudure*'[32]. Nowadays, even when the rains are good, yields are low and the area of usable fields is even smaller."

Of course, what a household head states as being required for his compound family differs from person to person and from household to household because such needs are affected by the ages of the children and the status of women (lactating, pregnant). Obviously, some fami-

[30] In Sirlawé, with its already brighter calories picture, the livestock situation, and thus the possibility of acquiring additional calories from meat and milk, is better.

[31] In fact this came down to (in some cases) only one calabash of flour for a family of more than 6 persons. Some respondents told me that they thought it shameful to come home with a handful of flour that could not even feed the children for one day and therefore did not even want to collect it.

[32] That is the yearly hunger period of the rainy season.

lies house more guests than others, some families experience more deaths in a year and have to provide for more funeral rituals and the accompanying guests, etc.

Table 5.2.9 Percentage of households without enough cereals or calories from agriculture.

	Not enough cereals[a]			Not enough calories[b]		
	1999	2000	Both years	1999	2000	Both years
Sirlawé	76	78	59	24	29	13
Tchatibali	80	73	70	55	64	42
Kolara	38	71	31	13	34	6

[a] = people's perception of need measured against production
[b] = FAO's figures of need measured against production

Of the households with two consecutive years of a shortage in agricultural production, only five (11 %) could make up for that with their animals (using milk and meat, within the normal offtake rate). Nineteen households (40 %) did not have any animals. The rest would have to use more than the normal offtake and will therefore lose out in a couple of years, sometimes within just one year. Most of the households in such a situation do not totally eat up their livestock. They go on hoping for miracles and/or prefer to sell. Above all, one last and usually meagre goat does not add much to the total food supply.

A comparison of Tables 5.2.8 and 5.2.9 indicates that the food situation in Sirlawé is the best of the three villages of origin, but a substantial part is still suffering from calorific shortages. On the other hand, the households with a shortage in Kolara have a very high shortage because a relatively low number share a high level of total lack.

It is important to measure the way inhabitants interpret the insecurity of the food situation and not only the calorific supply. In this culture, only cereals are seen as a real meal and all the other calorie providers are regarded as 'taste-givers' or just 'extras'. Thus, because the amount of cereals does not meet the villagers' expectations, the general vision of the inhabitants is that the food situation is insecure.

5.2.2 Human domain insecurities

Health insecurities

Declining food production and inappropriate aid distribution due to corruption and administrative disorder[33] means the energy and protein needs of the population are not (always) met (see above). This decreases resistance to diseases, minimises labour capacity and causes stunted growth in children, both physically and mentally.

Access to 'modern' healthcare is difficult because of a lack of money and because of long distances. This is especially true for Sirlawé that does not have even a small nursery post, and

[33] For example, in June-July 2001, radio announcements promised governmental aid for the Far North Province of 300,000 tons of rice or maize flour. When the flour finally arrived in Kolara village, only those with good relations with the chief knew about it and managed to obtain some, whether they needed it or not. Yet, they all ended up with very small amounts due to the fact that only a small proportion of what should have been brought to the village had actually been delivered.

for Kolara that only has a small 'dispensary'. The hospital in Tchatibali is bigger but still does not have many facilities. More often than not, vaccination campaigns do not reach the population. Sometimes this is due to a lack of involvement of the population itself and sometimes to poor organisation or a lack of necessary equipment. At the end of the dry season of 2001, for example, the Tupuri heartland was hit by a measles epidemic because of a regional shortage of vaccines. As a result, a lot of children and several adults without immunity died.

Traditional health systems were more embedded in the social fabric of the community and payment could take forms other than monetary ones or could be postponed until, for example, the patient had recovered. However, traditional healthcare is declining. In the heartland the remaining small holy bushes next to the chiefs' compounds cannot make up for the disappearance of the bush and its supply of traditional medicines. In the longer run, a loss of traditional knowledge of health issues is a serious risk.

In all three origin villages drinking water is supplied during the dry season via dug wells. Unfortunately most of these are not covered and are therefore usually contaminated.

Educational insecurities

Access to knowledge and information, both for daily life affairs and to improve human capacity in the long run is a difficult business. The quality of school teachers is not as it used to be because of a lack of training places. Nowadays, most primary schools perform their jobs with only one graduated 'director' and several 'parent' teachers who are young people who have sometimes not even finished their own secondary school education and who are paid by the parents of the children attending the school. This means that the policy of free primary schools is, in practice, being replaced by a system of school fees and (to cut down on expenses) classes of sometimes over 80 pupils. A lack of school utensils and books completes the grim picture that has arisen since the economic crisis of the early 1990s. Education to secondary school level or higher is beyond the financial reach of most inhabitants of the three origin villages.

On the other hand, as is described in section 5.2.3 on the economic insecurities, those that did receive a higher education were unable to find work. They returned home to take up agriculture again. In Sirlawé and Tchatibali this was the case of several frustrated young men who had received an agricultural or technical high-school education. Here the macro economic insecurity leads to personal frustrations because of a lack of possibilities to put capabilities (which have been heavily invested in) to work and to enhance people's individual situations.

5.2.3 Economic insecurities

Cash crop insecurities

Cash crop production is suffering from a lack of agricultural fields, poor soils, a low market price in general and too variable precipitation. In the past (1950 onwards), the Tupuri heartland gained a great deal from adopting cotton production in a time that world market prices for cotton were high. Since the second half of the 1980s, however, these plummeted and they have still not recovered[34]. Nevertheless, for most peasants, cotton is the only way of acquiring some surplus money. In optimal circumstances a production of 1400 kg per ha/year is possible (giving a profit of approximately 200,000 Fcfa). Although in village circumstances production never reaches this

[34] According to Oxfam International (2004) world cotton prices have fallen by half since the mid-1990s.

amount[35], almost all younger, male cultivators perceive the growing of cotton as the only way to earn some cash to meet household needs such as clothing and housing, but also calamities such as illnesses and death[36], or educational dispenses.

For that reason many farmers invest in cotton production[37]. They use the credit option of the SODECOTON at the onset of the rainy season to buy their seeds (cost 600 Fcfa/ha), the indispensable chemical fertiliser (48,000 Fcfa/ha) and herbicide (6400 Fcfa/ha) from this institution[38]. To cultivate cotton they need a plough, a weeding device and a device to make the little dikes on which the cotton plants stand *('corps biteur')*. After the harvest, several farmers are unable to make ends meet due to insufficient production: they have to pay back their loans at the moment they need the money for school fees, or to enter the market at a favourable moment to purchase agricultural equipment, extra millet as a stock for worse times etc. They then do not have enough food in the following sowing season and have to buy food at high prices, using the credit of SODECOTON for their cotton. If the rains fail they are worse off because of their debts (see Table 5.2.10).

Table 5.2.10 Number of respondents that did not cultivate enough cotton to make up for the investment and the range of money they lacked[39]

	1999		2000	
	Number of respondents (and percentage)	Range of shortage (Fcfa)	Number of respondents (and percentage)	Range of shortage (Fcfa)
Sirlawé	6 (10 %)	245 - 25,270	3 (5 %)	5,624 - 6,734
Tchatibali	7 (8 %)	560 - 10,1080	3 (3 %)	4,366 - 35,187
Kolara	2 (5 %)	6,720 - 40,080	3 (8 %)	3,360 - 36,800

The lack of cotton yield is sometimes accompanied by a lack of calorie-production for subsistence purposes.

> Wallidjo from Tchatibali (32 years old; 3 wives and 7 children) had a debt at SODECOTON of 101,080 Fcfa at the end of the 1999 harvest. He had sown 2 ha of cotton but, because of floods there was zero yield. Fortunately, that year the yield of the food crops had been good and he had produced a surplus of 370 kg above the calorific needs of his household. This is an equivalent of approximately 30,000 Fcfa at the moment of harvest. However, in 2000, the cotton failed again due to a lack of rain (and, says Wallidjo, because his fields are not fertile, and he has no money to buy more fertiliser). This time the debt amounted to 35,187 Fcfa and the food crops did not generate enough yields to meet the calorific needs, being 123 kg short. To buy this in the form of cereals,

[35] Raemaekers (2001: 1061): 1400 kg/ha is possible, but normally the production is 330 – 1110 kg/ha. He identifies the West African countries as the highest producers.

[36] The death of a family member is not only a sad occasion, but also means a burial ceremony has to be organised for the whole village and many family members and friends who come to visit from far-flung places for at least a couple of days. All these guests have to be offered meat and beer; the musicians have to be paid, etc. Such a ceremony is therefore an expensive event.

[37] Cotton is a specifically male crop and is not cultivated by many women although, very often, they help their husbands with the cultivation work.

[38] Because it is this organisation that sets the prices, in the whole Far North Province the prices are the same.

[39] For the total number of people that cultivated cotton see section 5.3.3.

Wallidjo would have had to spend 9,840 Fcfa. However, because he obviously did not have the money, he had to wait and had to pay the higher '*soudure*' price of 2001: 24,600 Fcfa. In short, over the two years, Wallidjo built up a debt of 130,876 Fcfa.

In short, cotton is regarded as a necessary profit-generating crop, but production levels vary widely between the different producers and over the years[40]. For an individual farmer, thus, it is an insecure investment.

The same can be said of groundnuts. With hindsight it is possible to detect whether or not it would have been better to invest in an additional field of cereals instead (see Table 5.2.11).

Table 5.2.11 Benefit calculation with alternative of rain-fed sorghum production instead of groundnuts[41]

	Mean 1999 groundnut production per producer				Sorg. prod. 1999	1999
	n	In kg	In Fcfa	Used ha	Fcfa / ha	Alternative benefit
Sirlawé	10	182	47,320	0.53	65,900	34,927
Tchatibali	5	150	39,000	0.26	102,000	26,520
Kolara	8	32.5	8,450	0.06	95,900	5,754

	Mean 2000 groundnut production per producer				Sorgh. prod. 2000	2000
	n	In kg	In Fcfa	Used ha	Fcfa / ha	Alternative benefit
Sirlawé	17	190	49,400	0.31	70,700	21,917
Tchatibali	4	75	19,500	0.31	97,300	30,163
Kolara	6	25	6,500	0.15	85,600	12,840

Table 5.2.11 shows that in Kolara and Tchatibali groundnut production in 2000 was less profitable than sorghum production (compare column four with seven)[42]. The rest of the time and at the other places the reverse was the case. For a farmer the choice is difficult, because the outcome is not sure. Other considerations also play a role. For example, the fact that the rotation of crops, especially in the case of groundnuts, is better for the soil and for pest prevention.

Insecurities with regard to farm animals

With regard to animal husbandry, a more insecure situation has also developed compared to that of ancestors. In general, there has been a decline in numbers of cattle per household over the years. The number of livestock possessed per household head[43] is higher in Sirlawé than in Tchatibali (see Table 5.2.12).

[40] De Steenhuijsen Piters (1995: 91) measured a difference of mean cotton yield over two years of 520 and 1000 kg / ha. The variation between the farmers was as much as 40 to 2530 kg / ha. A comparable variation can be observed in the three origin villages of this study.

[41] This calculation is based on the December prices of both peanuts (26 000 Fcfa per 100 kg) and sorghum (10,000 Fcfa per 100 kg).

[42] Under the condition that, for both crops, the seeds are already available in the household (meaning no purchasing costs) and labour demands are more or less the same and do not compete.

Table 5.2.12 Number of some farm animals per household in current and former generation

	Mean cattle / household in former generation	Mean cattle / household of respondents	Mean small ruminants / household in former generation[a]	Mean small ruminants / household of respondents	Mean chicken / household of respondents
Sirlawé	8.9	7.2	8.4	10.9	16
Tchatibali	5.2	2.0	7.2	7.0	8
Kolara	7.4	7.2	6.5	8.6	12

[a] = these figures are based on a very small number of answers because most respondents did not know how large their fathers' flocks were. Thus, although all respondents that did know the answer always stated that their fathers had more stock than they themselves, sometimes the village mean seems to have been lower in the fathers' generation. This is due to the fact that those respondents owned themselves a lower than (this-generation) village mean.

A decline in cattle numbers per household is not *per se* due to a rising scarcity of grazing areas. During the 1970s - 1980s in the whole province, the numbers of cattle declined because of the drought (Seignobos 2000e: 115). Tupuri did not escape this disaster and they have still not returned to pre-drought figures. Table 5.2.13 shows trends from 1950 onwards.

Table 5.2.13 Number or density of cattle over the years and per region.
Source: Seignobos (2000e: 115-119); Boutrais (1984: 433); Beauvillain (1989: 428); Djonwé 2001)

	1950	1980	1987	1993	1998
Far North Province	484,000 cattle	908,000 cattle	605,333 cattle	689,040 cattle	1 147,038[a] cattle
Kar Hay department	12 - 25 cattle / km^2	25 - 50 cattle / km^2	15 - 30 cattle / km^2	n.av.	44,400 cattle
Mindif region	7 - 17 cattle / km^2	10 - 25 cattle / km^2	5 - 15 cattle / km^2	n.av.	60,000[b] cattle

[a] = this increase is mainly due to a rise in numbers in the Logone floodplain since the restoration of the flooding by the Waza-Logone project.
[b] = a large part thereof are the cattle of nomads and rich cattle owners from the towns.

Part of the decline of cattle numbers per household in the heartland is due to a decline in grazing area[44]. As has been mentioned before, Tupuri adopted cattle-keeping as a lifestyle in addition to their agricultural activities more than three hundred years ago. They used to live in areas where wild bush could support extensive herds. Because they managed to withstand the Fulbe and other cattle nomads, they did not need to share their grazing lands with others. However, over the years, with the growing numbers of people, bush land decreased and sometimes disappeared altogether, as is now the case in the town of Tchatibali. Although a small band of grazing land is left for Tchatibali cattle owners, it is far from the city centre and it is far too small for all inhabitants to graze a substantial amount of cattle on. In addition, most respon-

[43] For the Tupuri cattle are mainly, if not solely, men's property.
[44] According to Gaston (1996: 75 etc.) each TLU in the non-mountainous Sahelo-Sudan zone needs at least 4.5 ha/year. Depending on soils and rainfall, etc. this can amount to 9 ha/TLU (see chapter 4, section 2.1).

dents in Tchatibali are too impoverished to have cattle at all. As a consequence, the amount of cattle dung available to fertilise the fields has also diminished[45].

Even in Sirlawé, where a pasture area has been retained which is big enough for the whole village to graze their cattle (see Box 5.1), grazing possibilities have diminished because of bad management.

Box 5.1 Pasture-land project in Sirlawé

In Sirlawé a mutual Swiss – Cameroonian government project installed a grazing area of approximately 25 ha some 30 years ago. In fact it was part of an agricultural learning centre at Dadjamka, a village just north of Sirlawé, whose aim was to invite couples to spend a year at their premises to find out about modern and integrated agricultural systems. For that reason the Swiss needed arable land in addition to range lands and they expropriated large amounts of ancestral fields, mostly from Sirlawé inhabitants without prior consultation or reimbursements. Nevertheless, after some time the Sirlawé agriculturists came to appreciate the pasture zone because it fulfilled their need. After a few years the Swiss withdrew, as was the original plan, and handed the centre over to what they called 'local people'. However, the director, a graduate of the agricultural University of Dschang, is not a local at all. Although he is from the Far North Province, he is not a Tupuri, let alone from Sirlawé. In addition, meeting the centre's financial obligations is a difficult task. It should have been self-sufficient, but this appears not to be possible. At the moment the institution is under threat. The director of the Dadjamka agricultural learning centre tends to lend pieces of the grazing lands to (mostly 'foreign', i.e. not from Sirlawé or Dadjamka) cultivators, probably to boost his own income. He himself, however, explains that his actions are based on the difficult financial position of the centre as a whole.

The diminishing pasture area annoys the former land owners. As more than one Sirlawé inhabitant told me "I gave up parts of my land to be used as pasture, because I think it is necessary to have cattle in the village to fertilise the soil and to provide milk for the children, but that man at the agricultural centre is having outsiders cut the trees and brushes and use the area again as fields. Now our cattle have less area in which to find fodder".

Bad management has changed a situation of common grazing lands into one of "the tragedy of open access" (see Hardin (1968) and others who enhanced his paradigm, such as Ostrom (1990)). Because bush land is given to incoming people the local inhabitants, who perceive the land as theirs in the first place, also start using it for agriculture: "It is no use to wait until all those others have cleared the bush and there is nothing left for us, neither for grazing nor for cultivating, not even one parcel." And they refer to Tchatibali where people complain of both a lack of fields and a lack of pastures.

In Kolara people do not consider a future lack of grazing space as a problem. They perceive the proximity of the bush as a perfect grazing option. It is the lack of agricultural land in the village itself that bothers them. This, and the minimal harvest yields, threatens their daily existence. Nevertheless, for the cattle owners, the immigration of more and more cattle-keeping nomads each year is a threat to their grazing options. Some of them, with substantial herds,

[45] A rough calculation reveals that for the production of 500 kg of cereals in the Sudano-Sahel zone 3.5 TLU is needed (Breman, pers. comm., in Leloup 1994).

explain that they seek other places to send their flock, like the grass fields of Chad or Adamawa[46]. However, if the herd is not within reach, it is more difficult to control herders and this leads to bigger losses[47].

Yet, the level of possession of cattle and small ruminants by Tupuri in Kolara village is, like in the heartland, lower than in former generations (see Table 5.2.12). This trend of fewer cattle started one or two generations ago. Older people complain about the diminishing of cattle numbers: "when I was a boy we could drink a lot of milk." And indeed, not only the total number of cattle has decreased but also the relative number of cows, because more bulls and oxen are kept as draught animals. There are several Tupuri nowadays who have lost their ability to handle cattle, as they never had the chance to get used to it. When they are in a position to possess them again (or use them for labour) their capability to handle their animals, to recognise illness, to treat them with (traditional) medicines etc. fails and they risk losing their cattle because of excessively late or erroneous actions.

Although Cameroon has a network of veterinary services and has managed to eradicate some of the widespread cattle diseases by way of vaccination (rinderpest; pleura- pneumonia, anthrax), proper access to veterinary aid is expensive. Several minor, but economically important (especially for the small owner) diseases continue to exist and modern medicines are almost non-obtainable. On the whole, a lot of owners lose animals each year due to disease (see Table 5.2.14). On the market, cheaper medicines can be found, but their effectiveness is disputable. 80 % of respondents who had had to deal with animal diseases over the last years referred to the use of market medicines being a waste of money.

Table 5.2.14 Number of households of respondents that lost animals because of disease

		Cattle	Small ruminants	Chicken	Ducks	Pigs	Donkeys	Total
Sirlawé	Households with animal losses	7	28	14	3	0	0	34
	Households with animals	35	46	44	17	4	0	55
Tchatibali	Households with animal losses	0	39	62	2	1	0	72
	Households with animals	29	67	67	37	61	1	84
Kolara	Households with animal losses	2	19	22	0	1	0	31
	Households with animals	16	25	31	19	16	13	34

With regard to small ruminants, a lack of knowledge about simple accommodation measures and anti-diarrhoea treatments during the rainy season causes unnecessary losses. Veterinary services did not develop vaccination programmes for small ruminants with enough enthusiasm and information to motivate owners, nor with the same strict implementation and control measures as for cattle vaccinations. For this group of livestock, as well as for chickens, epidemics of endemic diseases are normal. The widespread markets visited and the friendly exchange of animals does not help to keep diseases in check, but that is not a new phenomenon.

[46] For example, the village chief of Kolara (a Fulbe) wants to transfer his herd to Adamawa. But rich Tupuri explained that they also use this strategy.

[47] See, for example, Van Driel (2001).

Another insecurity as regards farm animals is their vulnerability to theft. In the densely populated heartland areas this is virtually non-existent because of the high levels of social control. However, the more extended bush lands of Kolara, where the herds and flock graze, are more difficult to control. Almost 30 % of the inhabitants there complained about the loss of ruminants by theft somewhere in the last 5 years. According to the chief of Gadjia, a village near Kolara, the number of thefts in the region has increased over the years.

Insecurities with regard to non-agricultural activities

Off-farm activities

Sirlawé and Kolara inhabitants could only start off-farm labour when they migrated away. However, in general they do not perform migrant labour. Only 1 person among all respondents tried his luck in Chad or other parts of Cameroon during the dry season. In the villages themselves both civil servant jobs as well as industrial jobs are not available, apart from a couple of posts as school teacher (for at the most 5 of the village inhabitants), or extension officer (less than 3 of the villagers). These jobs are not always given to local inhabitants. In particular, posts which require more highly educated staff are occupied by people from the city. They sometimes come from the south and mostly have family relations within the system. Younger, more highly-educated Tupuri complain about the lack of governmental jobs. When they started their high schools and further education they had hoped for an increase in the demand for their capabilities but "the number of jobs for the government seems to decrease each day."[48] Moreover, people have to travel a lot to trade. Because safety on the roads changes a lot, long distance trade can be a risky undertaking. Again, only 1 % of respondents supplements his income by way of trade.

In Tchatibali, on the other hand, SODECOTON installed a cotton processing factory in 1982 that provided several jobs for less educated workers. In June 2001, four percent of the people from Tchatibali Centre found a job there. However, during the last couple of years, rumours have spread that SODECOTON is due to close down this factory and employees are therefore very unsure about their future income position.

The higher population numbers here, and especially those of officials[49], merchants and truck-drivers[50], offer more possibilities for shops, restaurants and bars. In the centre of Tchatibali there are officially eight bars and restaurants and four shops. But, again, the number of customers will decline if the factory closes. In addition, after each heavy downpour, the road to the south (the Chadian border) is blocked by the gendarmes to protect it from being ruined by excessively heavy traffic[51]. In 2001, several shopkeepers complained about the lack of customers compared to the past.

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[48] More than one respondent uttered such a phrase during the fieldwork.

[49] As a district and trade centre, Tchatibali town has a sub-prefecture, a police post and a gendarmerie.

[50] The town is situated on the crossroads of several important trade routes which, for example, lead to Chad in the south. In addition, heavy traffic is also related to the cotton factory.

[51] This can easily be circumvented by bribery: who pays, goes. However, in the longer run this is contra-productive. When the road is ruined, nobody can pass.

On-farm activities

On-farm or house industry opportunities depend on, among other things, the availability of raw materials. Mostly these are growing in wild bush locations. Then again, the town does not offer enough supplies, and even in the village of Sirlawé the decline in the bush area is leading to a decrease in the availability of materials like grasses for mats, granaries and roofs. In Kolara the bush offers possibilities, but gathering always, means a long walk and an arduous return trip. Only a very low percentage of respondents owns a cart or wheelbarrow.

It is also difficult to gain access to wider markets, both for home-made merchandise and for agricultural products. In several neighbourhoods of the three villages there are only small weekly markets at which local products are sold and bought by locals themselves. Tchatibali town market, which takes place every Thursday, is somewhat better equipped, even offering fresh fish, pottery and, when the season permits, guinea fowl eggs, for which the region is famous and which attract outsiders. But again, in the event of diminishing rains, the fowls cannot find enough food and the number of eggs therefore drops.

Many women brew sorghum beer in order to sell the surplus at the market or for use at drinking parties at home. However, insufficient sorghum production for use as subsistence food also has a detrimental effect on these possibilities.

In general the inhabitants of the three villages do not have much trust in economic options other than agriculture.

5.2.4 Social insecurities

Family and clan insecurities

In the social domain, bonds between different (sub) groups as well as linkages from group to group and from one level to the other are important. Insecurities arise from the fact that family ties weaken. For example, in the past, fathers with cattle helped their sons to pay the bride price, but nowadays even a goat or two pieces of cloth are asking too much. In the past, outmigrating brothers and uncles kept their contacts with those that stayed behind. Within the migration tradition of Tupuri the moving frontier was seen as an outpost of the clan and the family. Most of the time, the new area was connected with the old one by a series of micro-migrations and in-between settlements. The whole area became the property of the whole lineage[52]. Today migration is discontinuous in the sense that between an existing settlement and a new one, large areas of non-group territory are situated. Although in modern times transport is far easier using bush taxis, bicycles and even private motorcycles, distances are regarded as long. Next to that, modern times require the building 'of a new life' in new areas, instead of perceiving this new life as an extension of the old one.

Individualisation grows. Waibe (63 year)[53] complains about the behaviour of his oldest son: *"I suffered to let him go to school. Because I sold all my cattle, he was able to attend secondary school. But now he is a policeman, and thus works where Biya sends him, he never visits me anymore. Nor does he send any money, while I have nothing left. He certainly earns enough. He does not even help to pay the school fees for his younger brothers. The only person he cares about is himself!"*

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[52] For the same mechanism in other parts of Africa see e.g. Perrot (2000).

[53] Tchatibali, June 2001.

The age-old obligation of looking after one's mother and father seems to be declining. Only 35 - 40 % of the respondents seem to be bothered by the feeling of such an obligation (even fewer people in Kolara, as can be understood from their shorter period of settlement there). Moreover, the thought that somebody should look after the fields - and even the graves - of ancestors is becoming obsolete. This is partly due to the increase in Christianity (34 % of respondents is of the Christian faith while only 12 % of their fathers adheres to that religion). Also the possibility of falling back on brothers etc. in times of hardship or when in need of cash for investment (in merchandise or schooling) meets with more restrictions nowadays. Those brothers with higher positions elsewhere, for example, seem to have loosened their ties with younger brothers and sisters at home. Less than half of the population now counts on family in times of crisis[54].

The bride price institution that used to serve as a security valve for older parents and that linked brothers and sisters to each other is on the decline. In the past, cattle received as bride price for daughters were sold directly for other needs, kept for the future or used to marry-off sons. But nowadays bride prices are lower than a generation ago. Mohammadou (1988: 107) mentions a bride price in Tupuri neighbourhoods of Moulvoudaye in 1956 of more than 10 cattle per marriage. Fathers of marriageable daughters now expect at the most three cattle. On top of that, these days most young men marry without having paid their whole bride price and are therefore indebted to their family-in-law. There are also couples who do not even consider sticking to the old tradition. This lessens the direct burden on the young couple, but it decreases the bonds with parents generations[55] and brides' brothers who still (have to) give in to the payment of the bride price. The current vagueness of bride prices makes the whole situation unclear and thus insecure.

When social capital declines, possibilities for organising collective investments decline as well. Sometimes, when a group manages to organise something, the lack of bonds makes the people involved choose for themselves instead of for the community. An example of this is the theft by the treasurer of the money collected in the Yolawo neighbourhood for the construction of a new well[56]. At the same time an attack on capital in other domains can no longer be countered with the help of the social bonds and linkages of the past. Claiming one's right is more easily done when backed by a strongly linked group.

Political insecurities

A feeling of belonging is also important for vertical linkages to politicians. A group needs to feel represented at the higher political and administrative levels and needs to have trust in its representatives. When these are of the same ethnicity and are shown to be connected to the ethnic group, this group has a platform in the political arena to voice its interests. This has to be accompanied by an implementation of general development efforts and effective conflict prevention measures, otherwise such a group can feel alienated and the political domain can start to booster conflicts.

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[54] The family is regarded as a security valve by 41 % of Sirlawé, only 14 % in Tchatibali and 29 % in Kolara.

[55] More than one young, married, man has major rows with his father-in-law because he did not pay (and will not pay) the bride price this father thinks is necessary. These fathers also have quarrels with their daughters because they do not obey the command to leave their young husbands who do not pay the bride price.

[56] This example shows a positive aspect that I will deal with in the investment section.

With the growing strictness of president Biya's reign from the beginning of the 1980s onwards, Tupuri had to withdraw more and more from the political arena. When, in 1984, not only northerners from the Fulbe ethnicity, but also from the Tupuri elite corps appeared to be involved in the coup against the president, the feelings of the political party in power turned against Tupuri. Not only were the fragile attempts to establish a multi-party system totally dropped for a number of years, but when it got momentum (at the beginning of the 1990s: see Ch. 4) the Tupuri party encountered only distrust and deliberate counteractions by the government.

Nowadays, lots of Tupuri complain about the lack of secrecy during elections, and they abstain from voting for their 'own' party out of fear. "If you do not support the RDPC[57] you will never get a governmental job or even famine relief aid". Joining the ranks of the MDR[58] to empower that party is, evidently, out of the question. Both in the heartland and in Kolara village only 14 % of the population dared to admit their support for the MDR during the elections and that applied only to municipal elections. The number is half this in the case of elections for the national assembly or presidency. How many people actually vote for the MDR remains a secret but the election outcomes suggest that it is, indeed, a very small number. Because of that, political representation of Tupuri is low and they feel 'forgotten'. "The government does a lot for the whole country", they say, "But what has it done for us?"

Indeed, several times over the last five years the government agency that should see to the construction of a water point took the money collected by the community but never supplemented the rest, nor sent workers to fix the well in question.

The difficulty of a multiparty system under an enlightened dictator is clearly demonstrated by the events of the 1997 municipality elections and their aftermath in the Kolara/Kobo region. After extra efforts from the politically aware Tupuri, the MDR succeeded in getting a MDR mayor in 1997 in the Moulvoudaye community (under which ranks both Kolara and Kobo resort). However, within two years this man surrendered to the ongoing pressure of the administrators surrounding him and changed his party membership for one of the RDPC. His constituency was deeply disappointed. Some of them have now announced that they will vote directly for the RDPC next time, instead of via a detour[59], although this will not result in any more implementations of their needs.

For many Tupuri the democratic system did not bring them more rights and security. Given the distrust of the ruling party towards them, the fraud that took place during elections and the pressure exerted on party members, getting their needs fulfilled is more difficult than in the past. "Being a citizen of Cameroon with democratic rights does not mean the same for each and everyone"[60].

Conflict mediation

The modern system led only to ambiguities about legitimate authorities. Particularly in the case of conflict mediation, which in the past was the domain of the village chief, all the different roles and positions make the outcome of a conflict unsure. Discords are not solved strictly by the village chief anymore. Instead, the parties involved can choose to approach other

[57] *Rassemblement Démocratique des Peuples Camerounais*, the party of president Biya.

[58] *Mouvement Démocratique pour la Défense de la République*, the Tupuri's party.

[59] Indeed, in the municipal elections of 2002, the Moulvoudaye population elected an(other) RDPC mayor.

[60] More than half of the respondents in the three origin villages voiced this idea. In the Kolara and Kobo settlements the number of persons who experienced this frustration was even higher (80 %).

authorities directly or later, if they are not satisfied with the chief's decision. For example, the village chief of Sirlawé had to visit the sub-prefect in Doukoula with two parties in a conflict, because the accused party did not want to accept his condemnation. This party (two inhabitants of Sirlawé) had not used the fertiliser that was collectively bought to increase the yield of a quart of their fields that was agreed to be used for a common goal of the same group. They had sold it. During the harvest their yields appeared to be lower than expected. Nevertheless, they wanted to participate in the group's stock possibility and the selling of sorghum when the price would be high. The other members of the group wanted to kick them out or wanted them to pay back the profit of the fertiliser sold. As far as the accusing party was concerned, this 'shopping' for justice cost money and time in a period of harvest, and outcomes are more dependent on bribery.

In the Tupuri tradition, women had an important role in conflict mediation and prevention. Old mothers (*Wog Clu*) could call conflicting parties before them to decide how to settle the discord. On the other hand, certain women (*Naré Bounsonre*) have contacts with god or ancestors as well as with nature and they can communicate advice and instructions to prevent disturbances of the peace. Some of these women only became active to warn against bad spirits that try to disturb relationships between community members or when natural disasters will strike. Others had the task of looking after daily conflicts and consulting the ancestors in order to reconcile them. However, the traditional concept of peace is disappearing and with it the role of women in conflict mediation (Ngongo Mbédé 2003).

Because the *gurna* (see note 6) is the place where Tupuri discuss and fix morality and values, it is another important institution in the realm of conflict prevention and mediation. In the songs and dances, misbehaviour (even of powerful persons) is ridiculed and publicly denounced, but the people who are the object of the derision also have the right to take revenge and clarify their case[61], as in a judicial court. However, with the migration to towns, the increase of modernity and the loss of cattle, this institution risks suffering a decrease in significance and ultimately disappearing altogether.

Land allocation and insecurities

As has been mentioned in section 2.1, access to (new) land is becoming more difficult and depends on social relationships. According to Tupuri tradition, land is inherited by married sons. Once cleared, land is the possession of the clearer and his off-spring. As in most parts of Africa, without the addition of new area, the division of land amongst all sons makes the inheritance per person smaller every generation. Therefore, occasionally a specific son is the only one to inherit from the father. Some Tupuri say that only the eldest gets it, others say land can be allocated to the youngest son if he has the special task of looking after his father, while his elder brother has the more pioneering function. In general, younger sons have fewer chances to inherit since by the time they get married, their elder brothers will have already received everything there is to allocate. In today's reality, all sorts of sons can inherit in all sorts of combinations. Even cousins and nephews can inherit[62]. The personal relationship between the

[61] See, e.g., Ignatowski (2001).

[62] In the past, this was a good method for making sure that the land would stay in the hands of the family once the first clearer and his off-spring left the area. For them this would more or less guarantee that they could come back and take up cultivation on the same fields, should the move turn out to be disastrous.

father and the son (or even with the mother of the son) is becoming more and more important. Fathers tend to give some land to married sons while they themselves are still alive, but then again they do so only to those sons they feel affinity with.

In the case of borrowing and even hiring and buying, social bonds with the owner are also important. It appears that just being family is not always enough anymore, even when the uncles or cousins dispose of a large area themselves. They feel too much of a distance with these non-direct family members and would prefer, for example, to sell to the highest bidder. In addition, in the past being a neighbour could be seen as a relationship that secured mutual use of fields, but nowadays borrowing is only possible from so-called 'friends'. This is a highly insecure position, as friendships can easily end because of minor quarrels, or because of the passing to another generation. For example, somebody may have a kind of life-long appointment with a friend to use one of his fields but the moment this friend dies, his offspring will claim the borrowed field back (or vice versa).

The position of, and thus the relationship with, the neighbourhood chief is decisive. It is he who has the power to allocate 'new' lands to newcomers or new grown-ups without (enough) land. *Djaoro's* (or land masters) benefit from out-migration, because abandoned land is returned to them. As long as they obey the rules of the *lawan,* the *lamido,* or the official authorities[63], they can use it to give to whoever they want. This can be their own sons and relatives, but may also be (sons of) those that have proven to be useful, or towards whom they have friendly feelings. At the same time, the decrease in the amount of 'free' land means the possibilities *djaoros* have to decide about other people's access to land are diminishing[64].

Allocation of land as a place to dig water wells or small lakes for livestock is mostly based on community decisions (neighbourhood or whole village). A group of wise men, inspired by ideas of the inhabitants in general, decide where the well has to come and where the corridors for the cattle have to be delimited[65]. Access to water is open for all. In times of scarcity the rule is: first come first served. Rules of proper use exist for artificial lakes and a kind of social control is in place[66]. When cattle owners do not follow the rules, there is for example an increased risk of the spread of diseases. In Kolara, people complain about a lack of water wells in the dry season for both men and livestock. Roads and cattle tracks are sufficient, so the artificial water points constructed by the Mindif-Moulvoudaye project employees can be used throughout the dry season, but one has to pay.

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[63] They have the right to designate certain areas as, for example, grazing lands. See Chapter 4 about official and customary laws regarding land tenure.

[64] In addition, the decision power to decide of the *djaoro* can be limited via another custom. The Tupuri know the institute of 'keeper of the wood'. This *djaksiri* guards the small holy bush that is conserved in each neighbourhood, next to his house. He has to guard the relationship with the spirits, for example by way of regular rituals (for example the moment a new piece of bush is cleared evil spirits have to be satisfied with sacrifices). Sometimes the functions of *djaoro* and '*djaksiri*' are not performed by one person. In such cases, the *djaoro* should contact the *djaksiri* to deal with important and difficult issues.

[65] As described by Seignobos (2000e: 115) the Tupuri have the custom of marking out cattle tracks from village to pasture with rows of *Jatropha curcus*, *Ipomoea fistulosa* and other densely growing plants. They do the same, if necessary, in order to reach watering holes for the herds.

[66] For example, such an artificial lake has been dug in the centre of Sirlawé. It has a big fence around it to prevent both misuse and children falling in. Some concrete devices have been constructed nearby to water the animals without contaminating the lake.

Cultural insecurities

Culturally-based habits in relation to, for example, conflict resolution can be a source of insecurity. Problems with family or other co-villagers can give rise to a fear of revenge or a decrease in the general legitimacy to stay. Four percent of respondents refer to quarrels with family or village members as the reason for out-migration (more often than not over trivial things). A lack of conflict settlement possibilities can give rise to the necessity to make a sudden move to other areas in order to be safe from revenge from within the village.

As in other African countries witchcraft accusations can strike at any moment[67]. Frustration with one's own circumstances and jealousy of someone else's can cause people to think that their luck has been stolen by the other with the help of magic spells. In Sirlawé the death of a young man, after he had suffered from several different diseases and had become very thin, made his mother accuse the village chief of witchcraft. The chief, a fairly prosperous man, had tried to help this patient with traditional medicine (as is the role of such a chief), but had failed[68]. If such an accused person does not have a very high standing in the village and if trust has declined, the only possibility (once again), is to go away. Indeed, Van der Ploeg (2001) encountered in one of the new Diamaré settlements more than one person who had left his home area because of accusations of witchcraft. Thus, wealth and prosperity can be a cause of insecurity, especially for those who do not play the political game or do not have brothers in the higher realms of the State.

As a result of modernisation and increasing migration to towns, the age-old institution of *gurna* (see note 6) - with its function of ensuring a social bond within clans and over the clans - , runs the risk of disappearing. As "the Tupuri recognize the *gurna* as a repository of communally-held moral values, and as a guardian of an ideal of Tupuri personhood" (Ignaotowski 2001: 7), its disappearance would have grave repercussions on the social and cultural capital of this ethnic group. As mentioned above, the effects will also be seen in the domain of the culturally specific methods of conflict mediation.

Although the 'new' religions offer strong ties to new communities and thus strengthen social networks, the choice of Tupuri for Christianity alienates them even more from the Islamic Fulbe in the Diamaré region. There were already significant differences between the two groups, for example in relation to housing patterns (settled Fulbe tend to live 'wall to wall' in centred villages, Tupuri dispersed between their fields), food preferences, the role of women and school attendance. The fact that Tupuri do not converse to Islam means they do not join in the after-prayer discussion next to the mosque in Kolara centre, nor celebrate the same festivities nor adhere to other general cultural customs. On the other hand, all three religious groups admit that they worship one and the same god and that only their rules and habits are different. These differences are not only due to religion. As mentioned in Chapter 4, both Islam and Christianity are firmly embedded in the customs and values of the ethnic groups that converted to them.

Because the Fulbe are currently the local holders of power in Kolara and Kobo, the increasing distance between Fulbe and Tupuri is reducing the opportunities open to the latter. In the long run it may engender conflicts and power shifts that may be decided using force.

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[67] There is a wealth of literature on witchcraft and magic in Sub-Saharan Africa. For information on the use thereof in the political (and power) plays of the 'modern' states: see Geschiere (1997).

[68] Other, more educated Sirlawé inhabitants voice the opinion that AIDS was the cause of this young man's death, but the accused still had to go to court to prove his innocence. That is in itself a difficult undertaking.

5.3 Investments: going to box 2

As depicted in the "insecurity complex" in Chapter 3, when people experience insecurities in a mutually influencing complex of domains, they search for strategies to overcome these. In the "To violence or escape (VoE) diagram" actors perceive the different possibilities in the step from box 1 to box 2 (Figure 5.1). To understand the step to box 2 of the VoE diagram the diversity of options that lead to certain strategies and the choice for specific options have to be explored. With a variety of capitals at hand (see Ch 2) the different Tupuri invest in the social relationships, economic goods, personal capabilities or environmental circumstances they encounter to improve their future and that of their children. Theoretically, in all these domains a diversity of options are open to them, namely in tackling (combinations of) all the insecurities (see section 2 of this chapter). Sometimes people do not really invest in anything, but just 'muddle through', perhaps only hoping that their positions will improve in the future. The actual investments are shaped by the combined effect of each of the four categories of the Actor-in-Context model as formulated by De Groot and Kamminga (1995; See Ch 2): the extent to which options can be implemented, objectified motivations, interpretations and the autonomy towards implementation per actor. I will describe the factors that influence these options and make people chose 'escape routes' (downward arrows from the central part of the "VoE diagram", see figure 5.1) or make them follow the route to the invasion of a new niche (box 2 of the VoE diagram).

5.3.1 Environmental investments

Investments in the quality of land

There are several options for improving the quality of the land and thereby increase agricultural production. Apart from the use of more fertilisers (natural or chemical), more labour resources (directly in the production process itself as well as in the construction of soil and water conservation structures) or more technological equipment can be used. Important aspects in this context are the availability of these three factors and access to them. Another aspect that has to be borne in mind is that, although Tupuri are seen as conservative – for example in contrast to the Mundang who are quick to adopt new crops and technologies, such as cotton and ploughs in the early 1950s (Hallaire1984) - nowadays Tupuri cultivators would certainly adopt new agricultural methods if they guaranteed their interests[69].

In theory the options with regard to chemical fertilisers in the three areas are to buy them at the market or to acquire them from friends and relatives or from agricultural extension services and the para-statal SODECOTON. In the latter case it is possible to choose between the use of special sorghum fertiliser for cereal production and the use of the cotton fertilisers on other fields as well. The times and methods of application are important (for example dispersed or only at the exact location of the seeds). The price of fertiliser is approximately 50,000 Fcfa/ha. There is no problem with supplying those who can pay in all three origin villages.

The use of natural fertilisers can consist of the application of animal dung (from own or borrowed animals or purchased or gathered manure), the application of household waste, the use of leaves or stems from harvest residues, the application of 'wild' organic matter (leaves of

[69] They have shown capacity to do so: first, when they adopted cotton cultivation as a new cash earning possibility and second, with their migration to the Maga irrigation project to earn a living in the rice fields.

standing or planted trees, directly or gathered in the bush and dispersed over the field) and, in Tchatibali, residues of the cotton processing village factory (see Table 5.3.1). In principle, the use of natural fertiliser only involves labour hours (except when cattle owners ask for money for the use of their animals, but that has not (yet) been established in the three origin villages).

Table 5.3.1 *Fertility ameliorating measures* (numbers and percentage of respondents; some actors use several measures simultaneously)

	n	Rotation	Animal manure (own animals)	Animal manure (other's animals)	Household waste	Natural fertiliser, not of animals	Chem. fertiliser	Nothing
Heartland	143	40[a] 28 %	60 42 %	10 7 %	49 34 %	7[b] 5 %	90 63 %	15 11 %
Kolara	37	1 3 %	18 49 %	4 11 %	10 27 %	1[c] 3 %	16 43 %	13 %

[a] = in the heartland this is only crop rotation
[b] = five times SODECOTON factory residues (in Tchatibali); one time stems and one time planting of *Faidherbia* tree in Sirlawé
[c] = *Faidherbia* tree planting

Farmers spread the household waste over the fields located in the immediate vicinity of their houses. They do not carry it to fields further away. Indeed, the compound fields are the most fertile. Yet, most of the time this waste is insufficient to fertilise a substantial surface. In Kolara a handful of respondents even knew about the method of making and using compost (although only one actually did so). However, it does require basic materials such as animal dung and water and demands some extra labour (although not all of it in the rainy season). In addition, a significant disadvantage, according to the users, is that the practice attracts maggots in dry years.

On the other hand, gathering leaves in the bush to disperse over the fields is an excessively demanding exercise. It takes more energy to gather enough to fertilise one field than the level of energy equivalents that the field would produce thereafter (let alone the fact that, in the heartland, the bush surface is very limited). Even the cotton factory residues are only used to a limited extent. Only a very small proportion of the population makes the effort to pick up the remains and carry them to the fields. It is, indeed, heavy work, but it can be done in the dry season after the harvest. It would therefore not interfere with the significant number of labour hours. When asked about the reason why they refrained from carrying out this activity, people indicated that they consider it too arduous without a cart to transport it, or too expensive. This last point is surprising because others, including the factory director, explain that it could be done for free.

With regard to further labour input the options are: working more and longer days by household heads and household members or involving friends and relatives. Another possibility is to hire labourers. The first is only possible in households with grown-up children, although relatively small children are left at home unguarded when the demand for labour is at its highest. On the other hand, farmers already tend to work from first light to late in the evening when the circumstances demand it. Wives start even earlier in order to prepare the meal that farmers take with them to the field. Working more days is only possible when the rains are plenty. Without

rain ploughing and sowing is not possible. In the north of Cameroon, schools are already organised in such a way that in the rainy season children can assist their parents (a three months 'holiday'). Involving friends and relatives is a well-known strategy throughout the whole Sahel-Sudan zone. So-called 'working parties' are organised by farmers to make it possible to finish a certain job in a limited amount of time (for example: harvest of millet needs cutting of stems, drying and battering of the grains in just a couple of days). In addition, it is more fun working together. It demands a certain level of social bonds, but it also adds to the social fabric. Most of the time, it is done on the basis of mutual exchange. The total amount of labour for a certain community does not increase, of course. The second option demands a monetary input that is only possible for the rich. Again, when the hired labourers are from the same village, the total labour force used does not increase.

Some types of requested labour for improvement of field-output are not restricted to the peak period. For example, several soil and water conservation structures can be constructed in the non-agricultural season. In such cases, an extra labour input is possible. On the other hand, not all measures require extra labour. For example, the blockade of surface run-off in a field by bands of wild vegetation crossways to the run-off only asks for less labour. Both types of measures are only necessary for those that encounter this kind of erosion. Table 5.3.2 depicts numbers of inhabitants suffering from erosion or water problems, and their strategies against it.

Table 5.3.2 *Number of respondents with erosion or water problems and their countermeasures* (NB. Only used measures are depicted; the figures depict problems as perceived by respondents)

Problems	Surface run-off				Inundation			Gully erosion		Wind erosion		
Measures	No measure	Dikes	Plant planting	Cross-strip	No measure	Dikes	Canals	No measure	Plant planting	No measure	Leaving stem	Tree planting
Sirlawé	4	0	0	0	0	0	0	0	0	0	1	2
Tchatibali	0	0	0	0	29	5	1	0	0	0	0	0
Kolara	2	13	2	1	3	1	1	0	1	0	0	0
Total	6	13	2	1	31	6	2	0	1	0	1	2

In total, 36 % of respondents complained about erosion or water problems in their fields, but only 15 % tried to do something against it. In Tchatibali, where inundations were the only 'erosions' signalled, farmers explained that the soil was too heavy to make dikes or canals by hand in the dry season, and that they did not have the money for or general access to heavy ground moving machines. They requested assistance from the government, but added that they did not have any trust therein. On the south-west side of the centre a kind of dike had been raised in the past by an NGO which offered some resistance to flooding. Yet, the benefits were not spread equally, so now some other fields are suffering from water problems, or even a lack of humidity. Five people with a run-off problem could not make clear why they did not use countermeasures like the ones employed by their fellow villagers. The sixth gave the same explanation as some of the inundation victims: making a dike or canal would make the water stream to the neighbour's fields and give him problems so that was not an option.

The planting of trees to increase the production capacity of the land is subject to a number of several problems, such as an unsuitable subsoil[70], not enough money to purchase the seedlings, no permission from the land owner or *lawan* to plant trees (depending on customary rules and personal social bands)[71]. To this should be added the general set-backs related to cultivation, such as too much shade in the growing season. However, most people explain that they leave existing trees standing in their fields if they can see that there are advantages to doing so, such as a fertilising effect. If possible they plant shade or fruit generating trees around their compounds (40 %) which can add to general household waste to be spread over the fields.

One of the options apart from aiming at an increase in crop yield is to try to increase the carrying capacity of grazing lands. When this indeed leads to a higher number of cattle, then it can also, via the manure, help to increase yields. In the Doukoula region (that includes Sirlawé and Tchatibali) the veterinary surgeon has started initiatives to sow higher yielding grasses[72]. He informs agriculturalists about it and sees to it that interested farmers get the necessary instruction and seeds without too many financial investments. At the moment, only a handful of farmers are involved. Investment in this seems only to be interesting for cattle owners. Even in their cases, it should not interfere with labour demand for cash or subsistence crops. Most respondents seem to be reluctant to "sow in the wild areas. Normally fodder should grow automatically there." The free rider problem is also mentioned as an obstacle: "Why should I work there, while everybody else can make his cattle eat the results…" Because the whole village could benefit from an increase in bush quality, a community initiative could support this development. However, up until now, this need has not been acknowledged.

More technological equipment consists of improved heels, ploughs and weeding tools and, as far as cotton is concerned, '*corps biteurs*'[73], or de-weeding chemicals. All this aims to reduce labour requirements per ha or to open up otherwise un-usable soils. In connection with conservation structures, the possibilities include mechanical earthmoving machines, etc. (see above). Cattle, horses or donkeys are needed for ploughs and draught weeding tools. Like bicycles and (for the rich) motorcycles these animals can also be used to transport products (from fields to granaries, from compounds to markets), especially when the animals can be used together with carts. This saves labour input (time) that can be used elsewhere. In the heartlands a third of the compounds have a bicycle. In a way it is a feature of Tupuri culture. Even a lot of women can and do ride bikes. Bicycles are used to transport all sorts of items, but also to visit family and friends, as well as to attend church ceremonies in town (the Catholics of Sirlawé, for example, tend to go to Sunday services in Doukoula, some 7 km down the road). Therefore, bicycles also serve the build up and maintenance of social relations.

Another technological improvement to reduce the insecurity of excessively variable lengths of the rainy season is the new higher yielding or quicker maturing varieties of crops. However, these sometimes entail higher risks, as they are less drought-resistant and harvesting has to be

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[70] During the field work several farmers asked for help to purchase tree seedlings, but others (mostly higher educated persons) explained that the region of, for example Yolawo, had an impermeable rocky underground that prevented trees from maturing.

[71] See, for example, Van der Ploeg (2001) or Scholten (2002).

[72] Information from June 2001. He had started this initiative several years earlier.

[73] The utensil necessary to form the small ridges which have to be formed around the cotton plants.

done in the already labour demanding times of the rainy season. In addition, in the event of abundant rainfall the risk of rotting is high because the grains cannot dry properly after harvest. Nevertheless, all Tupuri are interested in the new varieties and many people ask extension workers to bring seed, for example from Maroua. However, only a small proportion of them actually cultivate quick-maturing cereals. The seed supply is low and those who want to use it need money to buy the seed.

De-weeding chemicals are not widely used due to a lack of information on how to use them or even on the possibility of using them (and where to purchase them). The one user I spoke to complained that he had also destroyed the growing capacity of his millet plants, because he had obviously used too much.

An increase in most of the methods described or an improvement therein is difficult. Since time immemorial, Tupuri have used all sorts of soils and the different cultivars that best grow in these. It is Tupuri that see the value of the bare *hardé* soils in the Diamaré: "If only I had a good plough and a pair of strong oxen, I could turn the soil and have a very rich field here."[74] They improved their soils with appropriate trees and brushes to counter fertility loss and erosion. For example, almost all respondents in Sirlawé and Tchatibali are familiar with the fertilising effect of the *Faidherbia albida* tree, and mention *Ipomoeia mauritiana* as a gully-restricting device. In addition, the use of animal dung is an age-old habit that fits in with their cattle culture. Moreover, while other ethnic groups were still dependant on strict fallow rotation, they already had intensified their methods with the construction of dikes to hold back water or to retain water in transplant-sorghum fields.

However, declining yields and income, as I explained before, make it impossible to invest in existing measures, let alone new instruments and methods whose benefits are still vague. Indeed, the only tool that is quickly gathering in popularity is the plough. Since the introduction of cotton, ploughs have been incorporated in people's worldviews, in spite of the high monetary investment needed[75]. As can be understood in the Tupuri cattle-culture, oxen are the main labour animals, although this means a higher investment than donkeys. The owner needs two (more expensive) oxen for the plough as opposed to one donkey. Some households even have more than one set of animals. The costs are recouped when a matching number of ploughs is available (and the necessary labourers) or when there are so many labourers and fields that only one set of animals would quickly be over-used (and cannot work at all[76]). Especially in Kolara, the farmers with more ploughs mostly also own several sets of draught animals (that is: two or more donkeys and/or four or more cattle). The use of ploughs and animals depends on the monetary or social situation of the farmer: does (s)he have money to buy or hire the equipment or does (s)he have a relevant social network to borrow. Table 5.3.3 shows the spreading of ploughs and draught animals.

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[74] Remark by three different respondents, independent of each other, on three different occasions while walking a transect in the surroundings of Kolara and Kobo, June – July 2001.

[75] In 2001, a donkey cost 70,000 Fcfa (the price of approximately three bags of 100 kg of sorghum in the rainy season), a labour-oxen up to 100,000 Fcfa (and then it still has to be trained). A plough itself cost at least 45,000 Fcfa when bought at SODECOTON. Local ploughs cost approximately half that, but break down easier. Both a weeding tool and a *biteur* cost 40,000 Fcfa.

[76] This happens more than once, especially when the owner/user is not experienced enough and is unable to distinguish stubbornness from exhaustion.

Table 5.3.3 *Percentage of households using ploughs and draught animals.* (NB. The total number of plough users is not the same as the total of animal users because some farmers use donkeys and cattle).

		Households using ploughs		Households with labour-cattle		Households with donkeys		Household with horse
		One	More	One pair	More pair	One	More	One
Sirlawé	Own	50	4	27	18	0	0	4
	Hire	5	0	9	0	0	0	0
	Borrow	27	0	36	0	0	0	0
Tchatibali	Own	31	0	25	0	0	0	0
	Hire	21	0	26	0	0	0	0
	Borrow	6	0	6	0	0	0	0
Kolara	Own	38	14	19	5	27	5	5
	Hire	5	0	0	0	3	0	0
	Borrow	3	0	0	0	5	0	0

Until recently, the use of milking cows was not even considered. It is now being introduced by the agricultural learning centre at Dadjamka (near Sirlawé). But it takes time to change culturally-embedded habits. Still the vast majority only use oxen. Of course, donkeys can only be used when the soil is not too heavy. In addition, some cultivators prefer cattle because of the wider furrow they produce.

It has to be stressed that ploughing is heavy work, and that, for the use of cattle, more than one person is generally needed. On top of that, the drawback of plough use is mostly well known, as is that of chemical fertiliser use: it disturbs the soil too much and, after an initial production increase, the decline follows all the more quickly. “However we have no choice: with the decline of the rains, we need to plough and sow all the fields in just one or two days. And we need a real yield this year!”

Investments in quantity of land

Investment in the quantity of fields can be made while continuing to live in the same compound. That means that somewhere in the neighbourhood (in principle within walking distance) new fields have to be cleared or fields that have already been cleared have to be borrowed, hired or bought. In the heartland, the new clearing of fields is impossible. In Kolara, clearing within village distance is difficult, because much of the bush is further away, or the *lawan* has forbidden clearing. “On the other side of the road”, he says, “the project ground is situated. That is for cattle to graze.”[77] As has been mentioned, the possibilities of increasing one’s available area with someone else’s old fields are declining. People who are in elevated positions in society or who have bonds with those who have power (in terms of position and of money) have a greater chance of gaining access to land. Indeed, more and more people in the three origin villages are asking for money to help them cultivate their fields. Now respondents say, “It is difficult to find somebody who does not use his fields and is willing to lend them to you for free. In the past you only had to give a bit of the yield after the harvest, or your

[77] There are, however, certain Kolara neighbourhoods that started new fields “on the other side of the road”. For ten or fifteen years they followed the rule of the *lawan*, but now they have had enough of resisting looking at empty arable land next to their compounds.

wife would prepare some beer to drink together." Nevertheless, commoditisation of land is not very widespread yet, and borrowing and hiring do occur (see Table 5.2.5). Young farmers invest in building social networks in the hope that this will lead landowners to lend out fields to them. For example, they hang around the compounds of the rich and are quick to help them personally. They assist with the set up of a grass mat construction, help somebody to get to the hospital or explain difficult homework to children.

A last option is to go to a new area: the intrusion of a new niche (Box 2 of the VoE diagram in Figure 5.1). Those that indeed intruded into the bush of Kolara and Kobo will be dealt with in sections 4 and 5. Here I describe the options and ideas of those that are still living in one of the origin villages. Table 5.3.4 depicts which category of landowners considers leaving as a good option and which percentage per category gives land scarcity as a reason for this desire to move.

Table 5.3.4 Percentage of population wanting to leave for certain reasons per surface-category of land possession

	Arable land surface in possession			
	0	0.25 - 2.5 ha	> 2.5 ha	0 - 15 ha[a]
N	8	99	73	180
Number considering to leave	2	8	8	18
% giving lack of land as reason	25 %	4 %	8 %	10 %
% giving hunger as reason	0 %	1 %	1.4 %	1 %
Other reasons to leave	0 %	3 %[b]	1.4 %	2 %

[a] = 15 ha is the maximum a farmer in one of the three villages possesses
[b] = one person (= 1 %) mentions as reason a quarrel with another villager

Of those that express their wish to move, 22 % (2.2 % of total population) mentions the Diamaré plain and bush as their destination. They consider this bush region as being near their current villages and as historical Tupuri land. They have heard from friends or relatives who have settled there or who have seen the vast bush, that it is a good option. Nevertheless, half of the household heads that express a wish to leave the current village express doubts as to whether they will actually go. "It is very difficult", "I have many social obligations here", "To move you need a lot of money" and other constraints besides are often mentioned. In reality, a detailed balance of push and pull factors combined with negative and positive influences determines the implementation of a move.

5.3.2 Human domain investments

Apart from personal characteristics that are not easily changed, the human capability domain consists of health status, knowledge and education. Good health makes other investments more possible and ensures that capabilities in other domains can be used. Knowledge and education can open up jobs or increase access to political positions.

Health investments

Mostly, investment in health is an ad hoc activity. It is not an investment with a more or less long-term strategic aim. In the whole research area no person invested in the prevention of dis-

eases, for example by buying a mosquito net to prevent malaria. Health services, backed by the government and international donors, organise yearly vaccination campaigns against certain diseases. Unfortunately, not all mothers (and their children) attend these, although most of them do. On the other hand, with an outbreak of measles in the Tupuri heartland, all inhabitants complain that the government did not do enough to protect children. The story of a lack of vaccine spread even more quickly than the virus[78].

Improving the general hygiene of the whole population is another option to prevent diseases. Investment in hygiene at home is a regular and internalised activity. Tupuri tie up their small flocks so they do not spread their dung throughout the house. Small children are washed often, older people wash themselves every day and clothes are cleaned regularly. Most people, including children, wash their hands before eating.

In addition to this, time and energy is devoted to improving the health status by teaching (small) children some basic hygiene measures regarding the use of water. Open wells are equipped with side constructions to make it possible to rest buckets and ropes where no animals have tresspassed. Nevertheless, the strict implementation of hygienic use of wells is difficult. Many open wells are contaminated due to improper use. Cultural patterns brought by new religions, such as the Christian one, sometimes improved these habits. This was especially so when the churches invested in information campaigns and material aid was provided for the construction of closed wells. Even then, hygiene depended on the implementation and control of good habits by those involved. A sound communal approach to using the wells is indispensable. However, in most cases, nobody feels responsible.

The importance of latrines is explained at schools and by special regional information teams, but still not every household has such a device as yet. For older, non-Muslim inhabitants these constructions are too modern ("we always did without"). However, in the heartland, almost every house has a latrine due to an active policy of the former mayor[79]. This means that, apart from a community level investment, every household there has worked hard to construct these latrines.

In general, though, disease prevention with 'modern' means has no priority. However, in traditional religions a birth or name-giving ceremony is held to firmly embed a new-born child in the society and also in the world of "good gods" in order to protect him or her from evil (and thus diseases). The new religions (Christianity and Islam) also have these types of birth ceremonies to commend the new child into the care of god and the community members. Apart from being social happenings, these ceremonies are also investments in health (via prevention). Only when people fall ill (and cannot work anymore), or when children are really suffering from some kind of disease or other, will money be spent directly in this domain. Then, capitals from other domains are used. However, the small monetary possibilities open to poor peasants means investment in health is marginal: only small improvements are possible. Often, cheap, but unsafe medicine is bought on the market because hospital treatment is too expensive.

At the same time inhabitants of the smaller villages try to invest in hospitals via the social and political domain, mobilising their deputies and mayors to build at least a nursing post with medicines and to pay a salary for the nurse employed there.

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[78] Such an outbreak is not only dangerous for the life of children and non-protected adults, but also impedes the activities of mothers when they have to enter into quarantine together with their babies.

[79] In 2004, the number of latrines was decreasing because the current mayor did not control their existence. Latrines can easily be destroyed by the heavy rainstorms of the rainy season.

Educational investments

Tupuri love education. They send their kids to school partly to acquire enough education to become "a civil servant" or "to give him better opportunities when he gets involved in trade" and partly because education is a goal in itself: "It opens up your mind", "It makes you think better", "It is the basis of development of your children in general" and, "When you go to school you can speak with foreigners such as you yourself, and that is a good thing!"[80] Several persons literally said that the education of their children need not lead to a job *per se*. If people can afford it, they send their daughters to school as well, but to a less high level. Especially when a household has to choose between the education of sons or daughters, the boys get priority. Only a small 2 % of respondents considered school a waste for girls. In the three villages I did not encounter one family with a daughter at university, against several sons.

Table 5.3.5 School attendance of respondents and their children (of school age)

	% of respondents who visited school	% of respondents who visited higher than primary school	% of resp. who send (or have sent) children to school	% of resp. who send (or have sent) children higher than primary school
Sirlawé	39	27	55	30
Tchatibali	59	14	70	34
Kolara	46	5	54	19

Except for one or two respondents that did not and will not send their children to school, all the rest claim they will send at least some of their children (sons) to school when they are old enough. Sometimes parents decide to send (almost) all their children to school up to a certain level (half way or the end of primary school is a usual level to stop), but make one or two carry on even to university to try to obtain at least one or two higher employment positions in order to safeguard the financial position of the whole family in the future. Several households are willing to incur debts (asking money from relatives) to ensure some of their children go to school. In a corrupt society, such as Cameroon, to obtain diplomas it helps when pupils have family or ethnicity ties with professors at high school, or when they have established other social bonds. Buying your way through baccalaureates or other exams is a frequently used tactic.

In short, with a good eye for hygiene and a real hunger for education (even if one knows beforehand that it perhaps will not pay back economically speaking), a lot is invested in the human domain.

5.3.3 Economic investments

Investments in cash crop

One of the cash crops of Far North Province is groundnuts. Yet, only 12 – 15 % of the inhabitants of the three origin villages cultivate this crop[81]. The choice for a variety of crops can diminish vulnerability caused by the climatic unpredictability of the Sahel zone and the risk of pests.

[80] Fieldwork May – July 2001.
[81] See Chapter 4.2.

In the two years studied, groundnut yields were not very high compared to North Cameroon means, but they still added to the income or calorific position of the farmers involved.

The other, and most important, cash crop in the Diamaré and in the Tupuri heartland is cotton. As stated in section 2, most Tupuri consider cotton as the only crop that can bring in cash. Indeed more household heads choose to cultivate cotton than groundnuts as a cash crop (see Table 5.3.6).

Table 5.3.6 *Number of respondents (household heads) producing cotton or groundnuts* (n = 180 in total)

	Number of producers in 1999			Number of producers in 2000		
	Cotton only	Groundnuts only	Both	Cotton only	Groundnuts only	Both
Sirlawé	38	2	8	23	2	15
Tchatibali	21	5	0	15	3	0
Kolara	16	3	5	19	0	4

Comparing the production in Fcfa per ha of the two cash crops with rain fed sorghum shows that it is very difficult to predict the best strategy. Depending on the place and year of production, soil conditions and precipitation, any one of the three crops can generate the best results (see Table 5.3.7).

Table 5.3.7 *Production in Fcfa / ha of three crops in the three origin villages*

	Production in 1999 in Fcfa / ha			Production in 2000 in Fcfa / ha		
	Sorghum	Groundnut	Cotton	Sorghum	Groundnut	Cotton
Sirlawé	65,900	89,283	91,210	70,700	159,353	135,295
Tchatibali	102,000	150,000	18,235	97,300	62,903	61,295
Kolara	95,900	140,833	54,460	85,600	43,333	57,595

Each individual farmer can more or less estimate soil quality and possibilities for improving it. Based on the available knowledge a farmer can make a sophisticated guess as to which crop he can best cultivate. Building in some security against rain failure makes people opt for a variety of crops.

Some use the cotton cultivation and the connected chemical fertiliser gift to rotate products from year to year and then use the remaining fertiliser in the soil to improve the sorghum yield a year later (23 % referred to this strategy).

Although one would have thought that the flood areas of the Tupuri heartland are perfectly suitable for rice cultivation, less than 9 % of (only) the Tchatibali population actually grow it[82]. "With the insecurity of rains", the rest of the respondents explains, "rice is no option". During the start of the SEMRY rice project in Maga, many Tupuri went there to cultivate rice, but after a number of years they abandoned the project because it did not seem to have any future.

[82] In 2000, the number had reached 11 %, with a total mean surface of 1 ha, but production failed because of the drought.

Furthermore, some people explain that they have tried to grow a surplus of food crops for the market, to sell when the price is really high in the hunger period, but that the rains did not help. In Sirlawé this is done as a collective initiative. In the centre a large storage building has been constructed in which members of the group (everybody who is prepared to adhere to the rules) can store several bags of sorghum until the right moment of sale (see for further explanation the social investments (section 3.4)). The growing and selling of fruit can also add to financial income, but this demands a long-term investment with only slow returns and is, therefore, restricted to the richer inhabitants.

Investments in farm animals

Apart from cash crop cultivation to gain extra income, animal husbandry can also be considered. According to Tupuri customs, cattle are preferred. Nevertheless, less than half of the population can afford to keep them. After the reductions in herd sizes during 1980 droughts, increasing livestock numbers has been an expensive task. Small ruminants can offer a solution, or an in-between step towards restoring cattle herds. Indeed, several persons try to breed small ruminants or chickens to set up a trade thereof. Most small animal owners (and even cattle owners, who have more than only draught animals) regard them as a banking deposit to sell or to eat in case of need, or in case of social obligations. Table 5.3.8 shows numbers and percentages of ruminant-keepers and the ranges of animals per keepers' households; Table 5.3.9 refers to chickens and ducks.

Table 5.3.8 Number of respondents with small or large ruminants, and mean per keeping household.

	n	Number keeping both	Respondents keeping cattle		Cattle per keeper		Respondents keeping small ruminants		Small ruminants per keeper	
			Number	%	Mean	Range	Number	%	Mean	Range
Sirlawé	56	27	36	64	11.2	1 - 32	46	82	13.3	2 - 43
Tchatibali	87	27	29	33	6.3	1 - 36	68	78	9.5	1 - 50
Kolara	37	15	16	43	16.7	2 - 112	25	68	12.7	1 - 31

The (relative) wealth of Sirlawé is reflected in the figures for ruminant possession. The high number of cattle is also due to the fact that the Sirlawé inhabitants have managed to maintain a special grazing area (see Box 5.1). In addition, they still adhere to their age-old tradition of maintaining cattle-tracks measuring several meters across, lined with bushes and stretching from the compounds to the grazing areas[83]. This avoids conflicts between cultivators and herders and cattle are able to graze abundantly. Cattle-keeping is integrated more into the daily life of the village. Both in the heartland and in Kolara, giving additional food to cattle in the form of 'cotton-cake'[84] has become a regular habit since the end of the 1980s. In Kolara, after the cotton harvest, the cake, which is processed by SODECOTON from the remains, is

[83] See Seignobos (2000e), page 115: "The *blam day* (cattle tracks in tupuri) are situated, as a boundary, between the different neighbourhoods, and are aligned with *Jatropha curcus* and *Ipomoea fistulosa*".

[84] In French it is called "*tourteaux*".

deposited in 50 kg bags on the doorstep of the *lawan*. He organises the distribution. Everybody who produced cotton and has cattle is allowed a portion.

Although chickens seem to be easy to obtain (you just have to ask for a grown chick or two from your friend or brother and perhaps give him some beer in return) and to keep (they run around the compound looking for food themselves), they are not owned by 100 % of households in any of the three villages. This is partly due to the fact that they have a commercial value[85], so people are not that willing to just give them away. They also have a social value as a gift on special occasions or are used to prepare meals for visitors. In addition, just letting them roam about is not sufficient. They have to be given additional food to keep them in good condition and they (and their chicks) have to be protected from wild cats and birds of prey. Some of the (especially older) household heads seem not to be interested in the extra workload, albeit small. Some of the younger household heads have not had the possibility yet to establish a flock of chickens. Ducks are even more difficult to keep since they need at least a bit of water to wash themselves. This can meet with problems during the dry season. Nevertheless, more than 40 % of the population invest in ducks. These are mostly people who already own chickens.

Table 5.3.9 Number of respondents keeping chickens and/or ducks, and mean birds per keeping household.

	n	Number keeping both	Respondents keeping chickens		Chickens per keeper		Respondents keeping ducks		Ducks per keeper	
			Number	%	Mean	Range	Number	%	Mean	Range
Sirlawé	56	17	44	79	20	1 - 100	17	30	2.5	1 - 5
Tchatibali	87	32	67	77	11	1 - 49	37	43	4.1	1 - 10
Kolara	37	19	31	83	15	2 - 40	19	51	3.3	1 - 9

In the Tupuri heartland guinea fowls are a good option as regards breeding and selling eggs, for which the region is renowned. Indeed, a fifth of the population keep them, but others say that they are a nuisance because they make too much noise at night and cause destruction of freshly sown fields in the day time. With the majority of Tupuri still adhering to the traditional religion and the rest mostly Christian (Catholic), pigs are also perceived as a good economic alternative by some, although others reject the idea: “Pigs eat too much. And you have to keep a constant watch on them, they ruin everything”. In the heartland ‘town’ quite a lot of people keep pigs (See Table 5.3.10 for pigs and guinea fowl keepers), because it is easier to raise this type of animal, when you do not have lots of land.

Investment in the health of farm animals can be considered a way of improving economic accountability. The vaccination of cattle is an obligation in Cameroon, and most owners recognise the necessity thereof. Nevertheless, almost everybody considers the vaccination of only grown-up cattle and only up to 80 % of the herd[86] as enough to protect all animals. Owners are

[85] A medium size chicken of good health can cost 1500 – 2000 Fcfa on the (local) market.

[86] This is a rough estimate, based on information from different veterinarians throughout the region.

afraid of showing the real size of their herds because that goes against cultural practices and makes you more vulnerable to higher tax demands (namely, per head of cattle). On the other hand, less than 2 % of the population thinks about, let alone actually performs, the vaccination of small ruminants, despite this also being obligatory according to Cameroonian law. Because implementation by veterinary services and control is less widespread, and official papers are not requested for transport and transhumance, people do not regard the vaccination of their sheep and goats as important. Every now and again an outbreak of one of the more contagious diseases makes some people resort to the immunisation of their flock for one or two years, but this is only a minority and only for a short period of time.

Table 5.3.10 Number of respondents keeping pigs and/or guinea fowls, and mean animals per keeping household

	n	Respondents keeping guinea fowls		Guinea fowls / household of keepers		Respondents keeping pigs		Pigs / household of keepers	
		Number	%	Mean	Range	Number	%	Mean	Range
Sirlawé	56	19	34	9.7	1 - 24	4	7	4.5	1 - 12
Tchatibali	87	7	8	9.1	1 - 28	61	70	3.7	1 - 20
Kolara	37	6	16	7.2	1 - 20	16	43	2.6	1 - 7

Treatment against intestinal parasites is suffering from the same lack of preventive measures. Even when some of the sheep have died from diarrhoea in the rainy season, most owners do not perceive the selling of one or two of the remaining animals as a good income-generating facility to make it possible to treat the rest. Sometimes this is due to a difference between those who own and those who herd and a lack of persuading capacities from the herder. However, most of the time it is just something that has not (yet) entered the interpretative frames of the farmers. During the vaccination campaign for small ruminants in June 2001 in Kolara, the veterinary assistants complained about the low attendance percentages, although they had made several rounds through the village the days before to inform and motivate owners.

The same story applies to chickens. Agricultural extensionists try to persuade people to vaccinate their poultry. It is not expensive and quite easy to do, especially when a whole neighbourhood cooperates. But, people only think of arranging vaccinations when it is already too late and then vaccination does not really help. As a result, the next time they consider it to be a waste of money. That even such simple things can depend on social ties can be shown by the presence of the veterinary surgeon in Doukoula region. He is a Tupuri, appointed in his own home area and is very active in trying to inform the local farmers about all sorts of improvements relating to animal health, medicines, accommodation and fodder[87]. For him, as “one of us”, it is easier to get things implemented.

[87] Most veterinarians in Cameroon are soon promoted to high administrative levels and are no longer involved in implementation in the field, let alone in their own home area. The vet from Doukoula was personally asked by the Doukoula traditional authorities to stay for a time to help overcome some basic problems. Yet, in 2002, he was chosen to be mayor so his responsibilities were diverted away from animal husbandry.

An important product of cattle-keeping is milk. Yet, this is not often produced for the market. Milk serves social binding purposes which have been incorporated into the Tupuri culture. Often it is given to children (especially grown up boys[88]) to improve their health.

Investments in non-agricultural activities

Off-farm activities

Off-farm activities can be divided into full-time jobs or additional income-generating activities. Such activities can be performed inside or outside the village, but with the village as the place of settlement. Apart from the big labour migration to the rice fields of Maga in the 1970s and 1980s Tupuri do not work much as cultivators for others outside their village. When they want to cultivate elsewhere, they move.

Within the village, however, some of the inhabitants work for others as herder, grinding-mill labourer, house constructor or as paid agricultural labourer. But these labourers do not form a large proportion of the population. Many people herd their livestock in collective herds being herder in turn with other owners and almost every household has at least one member who knows how to construct houses and the accompanying roofs. Only the rich can afford to pay for agricultural labour, but often they do not need it. The younger families with a labour shortage do not have enough money. Another set-back to paid labour in the rainy season is the fact that hiring oneself out to work on somebody else's field is detrimental to the work on one's own fields. Most of the paid labour in the villages is done by young adults or adolescent boys and not by household heads.

Alternatives to non-agricultural jobs in the village are limited. In Tchatibali, as an administrative centre, some inhabitants found work in the offices of the sub-prefect, the police or the health centre. One has to be good friends with the authorities in which one has to invest before a job can be acquired. Additionally, a certain level of education is needed (most of the time). The same applies to the SODECOTON factory, although non-educated labour is also possible there[89]. Sirlawé and Kolara do not offer these possibilities. In all three villages certain persons can act as teachers (in Tchatibali even at secondary school, although the State does not specifically appoint locals there) or agricultural extensionist and information officer[90].

Off-farm jobs are also possible within the framework of private enterprises. With a small amount of money one can start as a small trader, working as a kind of hawker for products like soap, matches, biscuits, sugar, batteries, cigarettes and salt. To reach the different markets in the region a bicycle is more or less indispensable. If enough revenue can be generated, the next step could be to invest in more specialised products such as cloth, plastics (buckets, mugs and pots), or medicines. Two or three people in the Tupuri heartland villages are involved in the trade of (fresh) fish from Fianga Lake. Some people work as butchers, travelling from market to market, where they slaughter a (small) ruminant bought for the occasion, to sell in portions.

Next to that, people can earn by providing services like water transport (a cart has to be bought as an investment), healing rituals, as undertaker, as musician or as priest. Each village has its

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88 In the form of the 'milk cure', an individual or group activity comparable with initiation rites (See note 6).

89 Approximately 3 % of Tchatibali inhabitants find work in the factory for at least part of the year (dry season).

90 These jobs can be done for the State, agricultural organisations such as SODECOTON, or foreign NGOs that are involved in development, health or relief aid (also a possibility for women).

(motor) bicycle, watch, radio, mill-engines or even electricity connections (in Sirlawé and Tchatibali) repairmen. All this requires special knowledge and thus initial investment, at least of time. Many times youngsters learn the ins and outs by hanging around with the practitioners.

Although not a very big income provider, the gathering and commercialisation of (small) forest products, such as fuel wood and timber, fruits, traditional medicines etc. can certainly improve the financial position of a household. If there is enough bush and walking distances are not too excessive, this is a good option. Almost all inhabitants (especially in Kolara) earn some income this way, in addition to their agricultural activities.

A final off-farm option for acquiring an income is theft: in or between villages, as a kind of 'ad hoc' activity or as real banditry. Small thefts can pay off because of a lack in some areas of (social) control and legitimacy of customary law based arbitration. The second criminal activity is a more structural way of life with investments in equipment and weapons. In the social sphere it demands investment in a 'gang' and on one's position within this gang. In the human domain, good health and knowledge (for example of where and how to sell) are important. One has to be 'daring' and to have a certain (cultural) baggage. Bandits make a cost-benefit calculation of the risks of getting caught, the consequences thereof (financial; social; for life and body (freedom, torture, execution etc.)) and the general loss of 'normal' social position versus the wealth that can be acquired. In the villages I did not meet any persons who freely admitted that this is their way of life. However, some adults remarked about neighbours that is was rumoured "that his son is involved in the attacks on travellers in such-and-such area." The creation of a para-military anti-gang meant a reduction in the options for young bandits. However, this activity takes place in waves of action and reaction.

An economic investment in the collective sphere could take the form of working on the improvement of roads. This could be done personally or via social or political bonds. However, both in Tchatibali and in Sirlawé, access to the roads that lead to market centres (Tchatibali itself, or Doukoula, as the bigger trading centre in the region) is no problem during the dry season. Only some of the respondents complained about the state of the roads, and then only during the rainy season. Most of the times they blamed the over-loaded international trucks and stated that they wished the government would handle the situation better. But nobody invested in addressing authorities or politicians, nor did anybody try to organise a village initiative to improve the (rainy season) roads. In Kolara the roads to the regional markets in Lara, Kaéle and Moulvoudaye are good. The only problem here is the long distance.

For that reason, in Kolara the non-existence of a good, near enough and big enough and thus regional market is an issue for a number of people. They talk about persuading the *lawan*, because he has his doubts and has so far forbidden it. He fears an increase in improper behaviour that could offend the Muslim inhabitants (like he himself). Even worse, it would enhance criminal behaviour, he says[91]. For those who want to invest in trade, this is an impediment to their activities. They are willing to invest in social bonds to find alliances to put pressure on the *lawan*.

On-farm activities

The additional income from wild products can be higher when they are used in home indus-

[91] Interview June 2001.

trial activities. The home production can range from grass mats to granaries, roofs, brooms, rope, fruit cookies, etc. for which wild products have to be accessible, both by law (that is no problem in the areas of the heartland or the Diamaré) and from the point of view of distance and transport possibilities. The proximity of a market is important to increase sales, but the goods can also be sold in the small village markets as well. Most of the products can easily be made after years of 'learning by seeing'. However, the construction of granaries and roofs, for example, is a real skill that has to be explained and practised over and over again[92].

Besides this, the processing of agricultural products at home and the trade thereof at local markets or neighbourhood festivities is especially interesting for women. Depending on their religion, the total yields and their position in the household (and the permission, when necessary, of their husbands), they brew sorghum beer or prepare fermented sorghum drinks (yoghurt-like), fry beans or cereals balls (doughnuts) or grill salted peanuts. Although these are always small quantities, women can gain up to 3000 Fcfa a month. Normally this is enough to pay a hospital bill, school fees of children (when husbands do not provide for these), soap, cooking salt or cloth.

Mostly people perform a combination of one or more of these together with agricultural activities. Almost all respondents[93] claim to be cultivators first and foremost.

A kind of economic investment that saves labour and material later on is the construction of more and more (expensive) brick houses and huts with tin roofs. These buildings last longer than the traditional ones with loam walls and reed roofs that are easily destroyed by a heavy thunderstorm. Especially in Kolara, but also in Tchatibali and Sirlawé, several people have constructed such houses, and several others are saving money to make it possible to buy the materials. Initially it seems to increase affluence (one of the factors in the environmental impact equation I=PAT[94]), sometimes wanted to increase the status position, but in the longer run it may turn out not only to be a good personal investment but also good for the environment.

5.3.4 Social investments

As mentioned in the chapter on methodology the measurement of the total social capital and investments therein demands more research time than could be spent during this research. Therefore, I will only give some indicators and examples of social bonds and linkages as well as the rules and norms springing from them that are present or developing in the Tupuri heartland and Kolara.

Investment in family and friends

There is a difference between social mutual help in the 'town' of Tchatibali or Sirlawé and the newer village of Kolara. An objective way to measure this is to count the free exchange of utensils, such as ploughs and draught animals (see Table 5.3.3). Loaning out a plough or another tool is at the same time a sign of social bonds and an investment therein. Sirlawé

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92 The Tupuri are experienced in the construction of grass roofs without a wooden frame. This is a good method in places were longer, straight branches are missing. This art has to be passed from father to son. With less bush and fewer good grasses, this technique runs the risk of disappearing.

93 Except for 7 % in Sirlawé, 12 % in Tchatibali and 0 % in Kolara.

94 See Chapter 2.

shows a more than six times higher percentage of lending out of ploughs and draught animals than Tchatibali or Kolara. In Sirlawé people seem to invest in social bonds. A direct exchange of a plough for a couple of cattle was observed only once (in Tchatibali). In Tchatibali, with its more 'city-like' ambience, labour equipment seems to have become more commercialised. In town, social bonds have changed into economic ones. In Kolara village, however, percentages are the same for hiring and borrowing. In general, the people there use their own equipment. One could say that social bonds are declining, but commercialisation is not yet widespread.

At the same time, several groups of people are trying to start mutual cash-boxes, community granaries or fields to help in times of need. In Sirlawé a community granary has been installed[95] (with the help of a foreign NGO[96]), that stocks grain or cotton surplus[97] until the next rainy season to make it possible for members to buy back at the lower post-harvest price when necessary. In addition a group of women here have developed a mutual banking system together with their sisters from Doukoula (the nearby town) which combines its collective bank services with the distribution of information on children's health and nutrition, agricultural modernisations and fuel wood saving methods. This is a women's only group (although assisted by a man "to keep the financial flow accurate and going", as they say), that functions alongside an 'all inhabitants' group, consisting mostly of men, but with more emphasis on Doukoula itself. In the village of Kolara half of the inhabitants are members of a mutual deposit group, sometimes combined with a communal field and granary. Everybody knows of the existence of these groups, but some do not want to be a member (or have organised grain stockage with a smaller family group) and some consider themselves too poor to attend. "I have not enough yield or money to become a member". Some of these groups are organised with the help of the government[98] and SODECOTON and some are developed with the assistance of the catholic or protestant church. The latter sometimes also serve as security for widows and elderly people of the same congregation.

Horizontal ties can also be established with regard to status and money: the notable ladies of Tchatibali have organised themselves into a group which is separate from the rest of the villagers. Like in all other mutual cash-box systems, each month they come together to pay a stake. Together these make up a capital that can be borrowed in turn by the members, for trade investment, illness or agricultural equipment. Their bank deposits are, naturally, higher than that of the poorer citizens and so they also have quite a lot of possibilities for increasing their capital, charging different interests for commercial than for emergency loans. The monthly meetings also serve as a means to strengthen the friendship ties between the ladies and to widen the gap with the rest of the population. For others, thus, it is important to keep ties with this small group. And indeed, several women and girls can be seen regularly bringing water

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95 First it was started by SODECOTON, then PAM took over and nowadays it is an autonomous group called 'Postroc'.

96 The PAM, a FAO sub-institute against poverty and hunger.

97 Farmers put one or two bags of their yields in the warehouse directly after harvest and acquired the post-harvest price for them so that they can pay their debts. If they need cereals in the next rainy season, they are then able to buy their own (or co-members') bags back for the same price. If they do not need their own stock a year later, it can be sold at pre-harvest prices and used as a bank deposit for members' needs. Thus, the group had 3 million Fcfa for sorghum and 2 million Fcfa for cotton in cash in December 2003.

98 So-called "GIC's" = *Groupe d'Initiative Commune*.

or helping with small tasks during the meetings. It has to be said, though, that the ladies themselves work in their fields like the others, organise working parties in harvest times and help in those of others. In short, they also build on their wider social network to enlarge it beyond the small circle of the notables. Namely, wives of high civil servants, can suddenly disappear from the neighbourhood because their husbands are transferred to another post[99].

Distance as such (or the absence thereof) plays a role in the formation of social ties. Living in the same neighbourhood binds people together. Neighbours can quickly give a helping hand in case of need (for example, when the construction of a grass roof is finished and has to be lifted onto newly erected walls, one shout is enough to bring several people together), and doing that means that others will help you. In addition, the living conditions are more or less the same. For example, the lack of a water well is felt in the same way by all inhabitants of a neighbourhood. In several areas of Kolara people join forces to organise the digging of a water well. In Yolawo they collected money to fulfil the basic condition of a certain communal investment requested by aid agencies, before they came into action. Unfortunately, first the responsible governmental institute accepted the money, but never sent the workers to fix the well and later the local treasurer stole the cash and spent it on personal affairs. The group demonstrated the social bonds within this neighbourhood by accepting him back as a member on the condition that he refunded the stolen sum. Indeed, he is busy telling his story to everybody and without shame asks money to help him, in this way doing penance for his sins.

Nevertheless, this example also shows the setbacks of strong social bonds. It is not the first time that people get away with the theft of community savings without any substantive punishment. The first efforts to construct a water well date from ten years ago. Individual characteristics therefore play an important role. Can a treasurer resist the temptation of having so much money within reach? But also the principles and stubbornness (or wisdom) of people who hold power are important. In Kolara as a whole a small group of Tupuri had organised the supply of tree seedlings, but they forget to ask permission of the local *lawan*. Thinking that his authority was threatened, he could not (or would not) agree with the planting without a kind of ceremonial procedure; starting more or less at the beginning of negotiations. It took a lot of time. In the meantime, the plants withered away in the dry climate. This initiative did not result in a new orchard-like aspect of the different homesteads around Kolara Centre.

Political investments

In Sirlawé only one person actually performed political activities for his Tupuri party, the MDR. He talked to village members about the political program and the importance of having an opposition party that would voice the needs of the Far North, the '*bec-du-canard*' and Tupuri in particular. Although he makes his own official position difficult, with his firm standpoints he has built up trust for himself amongst his fellow villagers. In the village he has gained what he lost in the more official realm. Many others agree secretly with him, but point out that they have no choice.

In Kolara some inhabitants also back the MDR openly, but they also fear for their future possibilities. The adjunct of the mayor (and also of the MDR) heavily contests the switch his

[99] Indeed, in December 2003, the ladies group had vanished because most of the former members had moved. The new ladies have not (yet) managed to set up a new banking group.

boss made to the RDPC and is trying to raise co-villagers' awareness of fraud in the system. As in Sirlawé, most people agree, but the facts make them more afraid and they vote all the more for the ruling party. At village level the brave are very honoured, but one rung higher they are condemned.

In all three villages of origin several people give in to reality and try to change the lack of involvement of the State via the RDPC. Attentive observers can see the ongoing efforts of village and neighbourhood chiefs and their wise-men to influence the regional policies. But they have to act careful. Too much emphasis on governmental faults and they lose their position: nobody in the administration will listen anymore. Not enough support for the Tupuri cause … and the villagers will choose another representative.

Also in the realm of conflict resolution the chiefs have to manoeuvre very cautiously. If too many conflicts are not resolved in the village the community will spiral down to a state of upheavals that hinders development. Chieftaincy is an elected position, but many adversaries do not take the chief's decisions for granted. Constantly he has to build his legitimacy by way of social investments. He has to find a good equilibrium between friendliness and generosity on the one hand and firmness on the other. Other methods can also be used. The Kolara *lawan* has managed to build a strong reputation of magic power, with which he can make people adhere to his rules and solve accusations of witchcraft. Other chiefs try to make their subjects have trust in the official courts, so that larger conflicts can be handled there.

Cultural investments

According to Bebbington (1999: 2034) games, festivities and sports add to as well as form the cultural capital of a community. For Tupuri the "festival of the cock" in October to celebrate the beginning of the harvest, is a good opportunity to demonstrate social cohesion. Even in times of hardship, after a year of low rainfall, this festivity enhances mutual ties. This is important in order to overcome the rising scarcity. The beginning of the sowing season is also celebrated with a reunion, on which occasion the century-old drums[100] are played to signify the unity of Tupuri in and throughout the generations. A more contemporary way of building community ties is the very popular football match. During the dry season boys and young adults defend the honour of the village or neighbourhood every now and again with real fervour. Girls and women attend to cheer their heroes to victory.

In contrast with the declining family and clan ties in the origin villages, clan membership and ethnicity congruence are important when far from home. There, in 'foreign' realms, all other Tupuri are seen as brothers. They share the same cultural identity and that has to be stressed or even re-invented. Co-Tupuri are greeted with warmth and many hours have to be spent together, talking and drinking beer. At the same time this creates bonds so that there are always friends around in times of hardship.

[100] In Sirlawé, for example, this drum is said to be three hundred years old. The excavated tree trunk, which is as long as a man is high and whose diameter is at least a metre, is placed on a small pedestal under its proper roof, next to the compound of the village chief. Only the covering hides have to be replaced from time to time. When it is played the beats can arouse even the inhabitants of Doukoula, more than 7 km away. Each occasion has its own rhythm to pass the message around.

According to Ignatowski (2001) young Tupuri in schools and universities far from home invest in the re-vitalisation of their culture[101], especially the *gurna*. Although adapted to the new situation (without cows) the social, moral and 'judicial' function is still visible in the newly composed songs.

Part of the TupurTupuri identity is based on the traditional religion in which some people indeed invest in an attempt to convince others of the value of collective rituals. The Sirlawé *lawan* explains the sufficient rainfall in his village by the continuing habit of ancestor worship, bringing them sacrifices at the start of the rainy season[102]. Therefore, he stimulates his subjects to attend the periodic festivities that go together with sacrifices. For example, he makes sure there is an abundant supply of food and drink for the occasion.

At the same time, the old religion is disappearing. More and more young men and women are converting (mostly) to the Christian religion. By doing so they become members of a new and equally strong social group and one that extends the narrow boundaries of their ethnicity and region of habitation. They invest in this new life by attending Sunday services, praying with co-believers and trying to follow the rules of the church. Some go further and are really active in the Christian community. In their spare time they visit other church members and talk about the bible or they help individually or in groups to persuade non-believers to become member. The Christian church can be a good choice because it helps in times of hunger and provides more structural assistance in connection with development issues such as schools and hospitals. It can even be a route for personal growth[103].

In short, Tupuri in the heartland and in Kolara village have a broad spectrum of options to counter insecurities. Most of the time they manage to find enough of these options which can be implemented according to their wishes and interpretative frames, without it being necessary to leave. Yet, from time to time they decide that they need to seek the solution of their insecurities by going away. One of the goals of such moves is the intrusion of other (arable) land.

The general livelihood situation as well as the insecurities that exist in the villages of origin, together with people's investments as described in section 3 are summarised in Table 5.3.11.

In short, insecurities can be found in all four domains. Especially in the heartland the natural domain offers no security. In the villages of the Diamaré, scarcity of natural resources is moderate, but even there individual actors suffer from large shortages, which can not be curbed by personal investments.

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[101] See also the articles in the Ka'arang (e.g. 2002, 2003), information bulletin dedicated to "reflections on Tupuri culture".

[102] "The neighbouring village of Tchatibali", he says, "has problems with the rains because they have lost their respect for the ancestors" (interview May 2001).

[103] During my field work in Sirlawé the son of my host served as a catechesist in his spare time; when I came back in 2004 he was away in Yaoundé to follow a two years course of the Catholic Church, after which he had a job guarantee.

Table 5.3.11: Summary of current level insecurities and investments in the domains of the 'insecurity com plex', based on 'capitals'[104] *of the origin villages as a whole*

	Average level of villages	Situation of worst off third of pop.	Security (= expected level in future)	Invest-ments	Investments details
Physical basis	o to -	o to -	o to -	n.a.	n.a.
Population. density	- and o	-	-	-	o in Kolara; No real family planning
Land availability	o	-	- or +	o +	Diverse quality improving methods; Bush is considered free and abundant
Commod. of land	-	-	o	o	Rising, surprisingly low
Food production versus needs	o	-	-	o	Increase of ploughs; quicker maturing varieties when possible
Health	o	o	o	o to +	Rising
Education	o	o	o	+	Culturally important
Cash crops	o	o to -	o	o	Cotton important (world price low); worst off 10 % incur debts
Livestock	-	-	o or +	o or +	Heartland pigs and poultry; Sirlawé positive
Non-agricultural possibilities	-	-	-	o	Via education; in Tchatibali in services
Sociocultural	o	o	o	o	Loss of old systems, some increase of new ones; not more bonding with Fulbe
Political	-	-	-	-	Almost nothing
Land allocation	-	-	-	-	Only in bush age-old system still pos sible; dependent on chiefs
Conflict resolution	-	-	o	o	Forum shopping; much expected of formal administration, judiciary

(- = bad; o = moderate, + = good; in the investment column: - = no investment; o = a bit investment; + = a lot of investments)

5.4 Intrusion of other niche: Box 2

In spite of different other options ('escapes') to counter insecurities, still a substantial proportion of the Tupuri population chooses to move from origin regions into new areas. In the VoE diagram this is called the 'intrusion of other people's niche' (see Figure 5.1: box 2). This study focuses on the intrusion of Tupuri into the Diamaré bush between Kolara and Kobo. The factors that co-influence this step will be described in the following section. Part of the push factors from the Tupuri heartland (and the origin village of Kolara) are explained above. The differences therein for 'stayers' and 'go-ers' still have to be analysed. Also, why people choose the Diamaré, and subsequently the Diamaré bush as a settling area still has to be made clear.

5.4.1 History of Kolara and Kobo settlement

Although absolute Fulbe supremacy declined with the arrival of the Germans, they sometimes acquired more *de facto* power from the colonial overlords. Therefore, ongoing unrest in the whole Far North Province with regular attacks of 'Kirdi-groups' on both the Fulbe and the Germans, prevented Tupuri from really resuming their age-old move into the Diamaré plain.

[104] See Chapter 2.

Nevertheless, a handful of them from the South had started to re-invade the Daram territory already before the Europeans arrived and this immigration intensified after 1901 (Mohammadou 1988: 99). Only when the French were firmly established in the country and were loosening their ties with the Fulbe authorities to give some higher positions to Kirdi rulers, did larger waves of Tupuri from the heartland invade their (as they call it) former territory in the Diamaré plain (Fig. 5.3). From Guidiguis and Moulvoudaye onwards they returned to this region which has good, fertile lands[105]. According to French colonial archives[106] new non-Fulbe villages started in the outer region of the Mindif *lamidat* from the early 1930s onwards. Before that time some individual Tupuri had come into the area offering their labour force to the incumbent Fulbe[107]. The increase in immigration was partly due to the locust originating famine of 1930-1931 that made many people start looking for other possibilities. On the other hand, in this same period, the rest of the Mindif *lamidat* saw a net decrease in the population because of emigration, again due to the famine, but also due to the harsh ruling methods of the then *lamido* and his son and successor, Yérima Hamadou. This last reason continued to apply until 1940, when 1200 inhabitants had fled the region. Together with the human out-flux, the number of cattle also decreased[108], although part of this decrease was due to cattle-sale and consumption in the famine years. Over the years Tupuri numbers kept on growing. Although first at a low pace, the numbers later increased more quickly. In 1937 2752 Tupuri inhabitants were counted in the Mindif sub-department. In 1941, this number had already grown to 6544 (of which two-thirds were in the *lawanat* of Moulvoudaye, the original stronghold of Tupuri blacksmiths).

One of the settlement areas was the *lawanat* of Kobo. This village was already occupied by Mundang the moment the first *lawan*, Ardo Haman Djam, settled there, coming from Gadjia[109]. Between 1930 and 1934 the French administration decided to put this small *lawanat* under the authority of Kolara, but in 1934 it was returned to the direct responsibility of the *lamido* of Mindif. Nevertheless the incumbent chief did not pay much attention to either of the two authorities. Under his leadership the number of Tupuri and Fulbe increased[110]. Later the total population diminished again[111]. This was partly due to an out-migration of Mundang, who returned to their places of origin, such as Gaban. Only some very rural neighbourhoods far from Kobo centre remained intact.

The territory of the *lawanat* of Kolara was another of those net immigration areas. Counting backwards from the 1937-*lawan* Yéro, the 6th lawan of Kolara[112], it can be assumed that Kolara

[105] See Texier (1937) in Beauvillain (1989: 243).
[106] In Mohammadou (1988: 92) and Beauvillain (1989: 492-504 and 524).
[107] See also Feckoua (2002: 2) about "*les salariat agricole* …"; in good harmony with the Fulbe landowners.
[108] Between 1930 and 1934, cattle numbers decreased from 4127 to 2646 and small ruminants numbers from 6823 to 2582.
[109] Ardo Haman Djam was the great-grandfather of *lawan* Saïd who was the sixty-year-old chief in 1937. Calculating backwards means that Haman Djam settled in the Mundang village of Kobo around 1850.
[110] In three years time the non-Muslim inhabitants increased from 8 to 44, the Fulbe from 266 to 391 (Beauvillain 1989: 243). According to Mohammadou (1988) in 1935 the number of inhabitants was 312.
[111] In 1968: 303 inhabitants (Mohammadou 1988).
[112] He descended from Ardo Naï Houdou from Boula near Mokong, from the 'Illaga' family that formed the chiefs of the Fulbe group of Gazawa (Texier (1937) in Mohammadou 1988: 96-97).

was founded by the Fulbe in approximately 1860[113]. After a slowly start, it grew by 10 % in three years from 909 to 1001 inhabitants between 1930 and 1934. After a short decrease[114], from 1935 to 1937, the increase was even bigger: a doubling in 2 years[115]. Later in the century the population increase lessened, but until 1976 the total increase amounted to some 2 % per year.

That this village remained attractive for immigrants in contrast to the surrounding Mindif-*lamidat* villages can be traced back to its *de facto* independence. Although this village officially belonged to the "outer-region" of the *lamidat* of Mindif and was therefore officially subjected to the *lamido*, in reality the chief of the village, a Fulbe from the same high family as the *lamido* of Mindif himself, ruled his territory without any consultation with his formal chief in Mindif. This regularly resulted in hard feelings of the *lamido*. Texier (1937)[116] mentions the "*rancune du lamido contre le louanane*" de Kolara, that made it difficult for the French administration of the time, which wanted a simpler authority system, to re-divide the municipalities.

During the rest of the century Tupuri from the heartland continued to settle in the Diamaré. Most of the time they constructed their homesteads in the vicinity of existing villages, where patrilinear or matrilineal family members or friends had preceded them or where they had relationships with the incumbent neighbourhood chief. Settling in the 'empty' bush, 'totally alone', was no option. Thus, the different neighbourhoods of Kolara are founded in a sequence from one-and-a-half century ago up until today.

An example of a Tupuri neighbourhood founded in the early 1930s is the Kolara neighbourhood Tchoufi, on the road to Gaban[117]. At that time, Tupuri from Tchatibali arrived , attracted by the abundance of *Karal* surface and options for white sorghum that cannot be found in the North of Kolara and Kobo. In the same period Fulbe from Guidiguis, who had quarrelled with their chief, settled there (1935). In contrast with suggestions about inherited revenge-feelings etc, the two ethnic groups seemed to get along well with each other.

Two of the neighbourhoods of Kolara that have been studied, namely Pitoa and Djendjerengue (together with some others) were founded in the early 1950s or late 1940s[118]. These neighbourhoods continued to grow because of immigration up to very recently[119]. The third

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[113] This is consistent with the stories of the current *lawan* of Kolara and the *djaoro* of Gadjia, who is of the same descent. According to Toukou, the current Gadjia *djaoro*, Naï Houdou was the first settler in Gadjia. His son Haman Djam became the first *lawan* in Kobo, his grandson Oumarou founded Kolara to defend Gadjia against the attacks of the Lara inhabitants (the name Ko-lara means: the people from Lara will not come here). The second, third and fourth *lawan* of Kolara were brothers. The second went away after a conflict with his *lamido.*

[114] According to Mohammadou (1988: 97), in 1935 the number of inhabitants had again diminished to 689.

[115] The Kirdi population increased from 152 in 1935 to 597 in 1937 (increase of 293 %), while the Fulbe increased from 528 to 883 inhabitants (Beauvillain 1989: 243).

[116] In Mohammadou (1988: 98).

[117] Texier (1937) in Mohammadou (1988: 96-97).

[118] This can be deduced from the fact that 73 % of the respondents of Pitoa and Djendjerengue (n = 26) were not born in these neighbourhoods and only three of the fathers were born in Pitoa (no one in Djendjerengue), whereby two of them did not stay there long enough to make their sons be born there. 43 % of the respondents came to the neighbourhoods with their fathers, while they were still boys.

[119] Only four respondents (out of 26) said that they had come to the neighbourhood where they now live less then 10 years ago. One of them has only been there for two years, but he moved from an adjacent neighbourhood, while he had already some fields in the current one. Another person arrived ten years ago but never cleared new fields: he inherited all he uses now.

neighbourhood of study, Yolawo, is newer still[120], dating from the late 1950s or even early 1960s[121]. For birth places of respondents, their fathers and grandfathers, of the three neighbourhoods, see Table 5.4.1. The regions of origin of the three neighbourhoods show a slight difference: most fathers and grandfathers in Pitoa came from Tchatibali; those from Djendjerengue originated mostly in Chad. Yolawo has its origins in the rest of Kolara or other Diamaré villages. Before they settled in the Diamaré, most of the fathers of Yolawo respondents came from Chad and some from the Doukoula-Tchatibali region.

Table 5.4.1 Percentage of persons in three Kolara neighbourhoods born in a certain place of origin

	Current neighbourhood[a]	Rest of Kolara	Rest of Diamaré	Heartland	Chad	unknown
Respondents	33	16	16	27	8	0
Fathers	11	8	5	43	30	3
grandfathers	0	0	3	22	50	25

[a]= In Yolawo half of the respondents were born there, but none of their fathers or grandfathers. In the other two neighbourhoods approximately a quarter of the respondents were born there.

History of bush encroachment in Kolara and Kobo

While Tupuri from the heartland area, or 'nearer', are still arriving in the original settlement neighbourhoods of Kolara, a further movement into the open bush area has started. (See in colour quire *Photo 5.1 see the centre of this book.*) After twenty years of strict control over the use of this area because of an ambitious Pilot Project with a combined agro-pastoral goal, the end of the project in the middle of the 1990s opened up the bush (see Box 5.2). Some Kolara neighbourhoods, situated along the road that serves as the boundary of the former Project area, crossed the road to start clearing the bush opposite their compounds (see Fig 5.5). The Kolara *lawan* objected to that, even after the end of the Project, but he seemed to have lost the battle. The more remote, central parts of the bush were the destination of settlers in even earlier times. According to Van der Ploeg (2001: 90) since 1995 "seven new Toupouri *quartiers* – Boulam Balé, Kobo Gar, Werdje, Balane, Souka Lougol, Haiga Yewa and Badadji[122]-, have been created on the territory of the Kobo *Lawanat".* Villagers themselves say that Boulam Balé was founded in 1996 and Balané in 1998. Other *lawanats* in the region are also having to cope with new settlements. "The other two new settlements in the area, Damdama and Bela, were created in the *brousse* of the *lawanats* Kolara and Gaban respectively." (id. note 138) and this process is continuing.

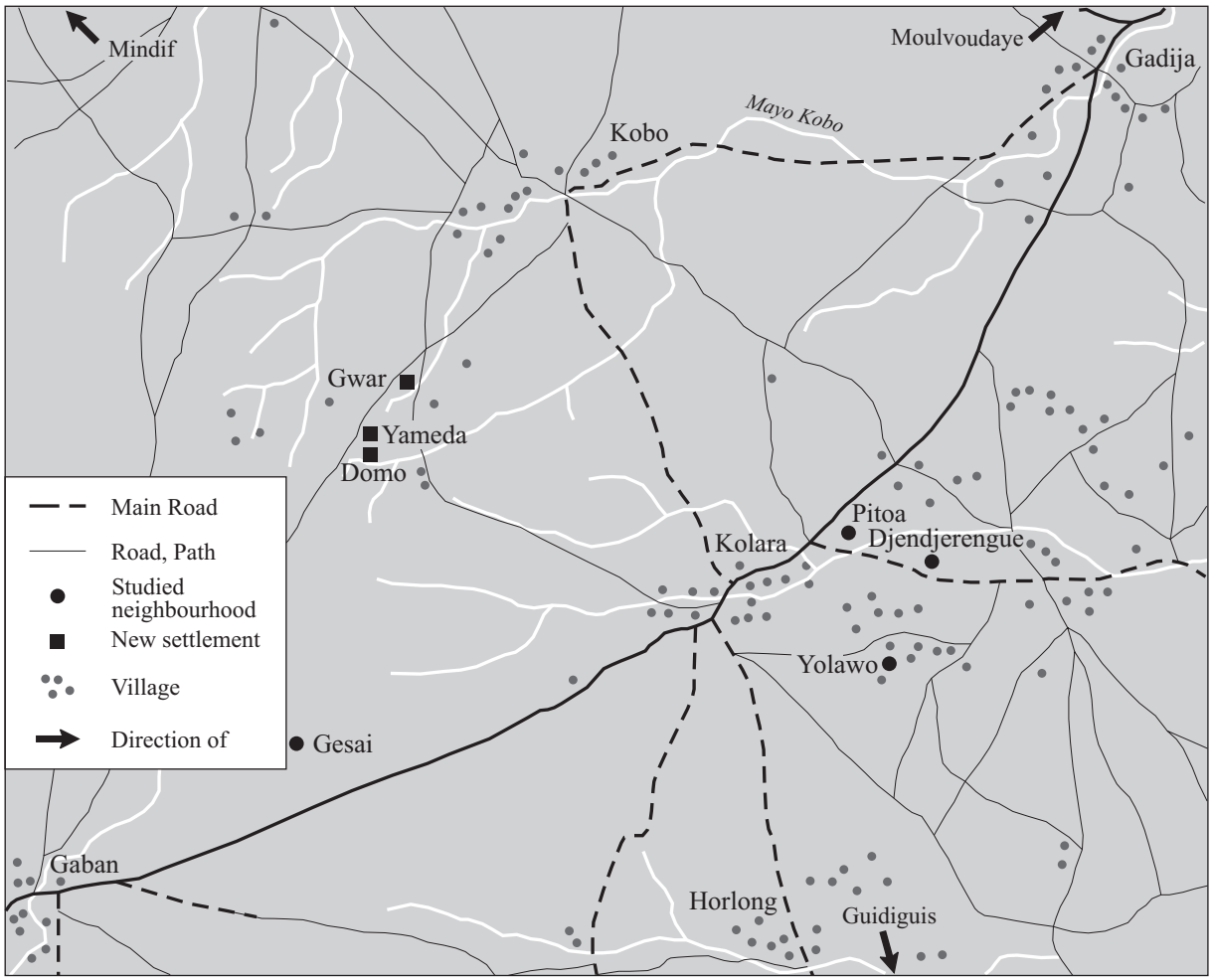
In the dry season of 2000 (February-March) new clearing activities took place in the centre of the bush between Kolara and Kobo (Fig. 5.5). In 1995 the now *djaoro* of Yameda neighbourhood decided that he wanted to start a new village in the Kobo bush, because in his home-

[120] One of the older respondents recalls the fact that he was living in Djendjerengue together with his uncle when he decided to move to the empty bush of Yolawo together with the then future neighbourhood chief to start a settlement.

[121] This is consistent with the information of the Yolawo neighbourhood chief, and one of his subjects (81 years of age) who stated (June 2001) that the neighbourhood was founded 46 years ago.

[122] Van der Ploeg (2001) discusses whether or not Badadji is actually situated in the *lawanat* of Kobo. He devotes a whole chapter to this settlement and the controversies about the boundaries and responsibilities between the different *lawanats* over this settlement.

Figure 5.5 Place of new bush settlements (and research neighbourhoods)



village Sirlawé (Gaban)[123] he only had access to 0.25 ha of fields. He knew the place: there was a lot of space, no nomad camps and good, dark soil with a lot of "*brem*" bushes that signified a high fertility[124]. He approached the *lawan* of Kobo, who only asked whether he had children. When the answer proved to be "yes", the *lawan* referred him to the official administration for permission. So the *djaoro* went to see the sub-prefect of Moulvoudaye and the police superintendent there. Without any payments he got his permission, upon which he started to look for other people to join him.

[123] Tupuri are used to giving the name of their old village to a new settlement to denote the link between the two. Therefore there are, for example, several Sirlawés. The one referred to here is a Sirlawé in the Gaban territory.

[124] The Tupuri name *Brem* denotes *Acacia ataxacantha*, a bushy acacia species that grows where the soil is overrich with cattle-dung. For agriculturalists this means: highly fertile. For cattle-nomads this means: overstocking by cattle and a lack of pasture management with fire. In short, too many inedible bushes and too great a risk of bush-encroachment by insects and insect-born diseases (interviews in May- July 2001 with cattle nomads and farmers, as well as personal comments of Onana, pasture expert of CIRAD; see also Mvondo Awono *et al* (2001)).

After a year he had found three others with whom he rechecked the area. They chose the exact territory and asked the *lawan* again. With this information the *djaoro* continued his publication rounds and managed (individually or via a meeting of six persons from different villages in the following year) to inform several household heads of the initiative. This last group affirmed his leadership, as he was the oldest and the one that had started it all.

Because of a deterioration in the security situation (an increase in the incidents of banditry along the secondary roads and in the bush of the region) they postponed the clearing–phase of the whole plan. Finally, in the end of 1999 and the beginning of 2000 the *djaoro* and three fellow-settlers started with the clearing. They were soon followed by others. Up until May 2000, nineteen persons in total had prepared fields in the Yameda territory that was called 'Haiga Wega' in that period. All settlers repudiate the presence of nomad camps on the exact spot of their clearings. Nevertheless, in early 2000, here the researcher has seen the signs of at least two of these in short distance from each other. In mid 2001, no nomads claimed the Yameda territory to be their former camp-site. From after the rainy season 2000 up until July 2001 six other families have arrived.

Most of these immigrants had heard about the settlement on the market, from the *djaoro* himself or via friends and relatives. Only four out of the twenty-five household heads knew the area from hunting or wood gathering. All immigrants, except one, who used to live in Touloum, came from the surrounding Diamaré villages: six of them from Gaban, and five from Kolara; three even from the nearby village Gesai, where the settlers have to gather their water, some 10 km away[125].

Next to Yameda – sometimes very close by - other new settlements continue to come into being. The *djaoro* of Domo, for example, who had recognised the good soils in this bush spot already five years ago when he came here from Gesai to gather wood, had quickly obtained the Kobo-*lawan*'s permission. He straight away paid this *lawan* half of the asked sum for the administration (20,000 Fcfa), but then the *lawan* told him to start his neighbourhood first. Only when some compounds had been built would he, the *lawan*, come to see and to collect the other half ("and a small gift, such as a chicken", adds the *djaoro*). Thus, the *djaoro* started to clear his part, keeping the (tertiary) road from Doyang-Gaban to Kobo as the boundary between himself and Yameda as he had already discussed in Gesai with other candidates for re-settlement (see Figure 5.5).

From the harvest of 2000 until April 2001, ten more household heads arrived in the Domo territory. Again all these came from the Diamaré surroundings, this time no fewer than five from Gesai. All pioneers come, look around and, seeing the richness of the soil, ask permission of the *djaoro* of their choice to stay. Then they walk through the bush with the chief and, depending on their capacity and wishes, determine the limits of their territory. The Yameda chief has established a limit of 3 ha per household for transplant-sorghum fields alone to ensure all new settlers will have at least that. Although he assumes that the bush is "endless" he also anticipates a lot more immigrants, so he "wants to be sure".

In addition, which part of the transplant-sorghum surface area has to be for Domo citizens and which part for Yameda has already become an issue between the two *djaoros*, the more so now the Yameda chief and some of his subjects do not recognise the existence of two more

[125] One of these settlers only stayed one year in Gesai, as a bridge year before he had cleared enough area in the bush to expect enough yield.

neighbourhoods in the vicinity. Although there is quite a band of bush between Yameda and the two new compounds of Gwar, the neighbourhood that is started in 2001 by two families from Benene (an older Kolara neighbourhood), again with the permission of the *lawan* of Kobo, the Yameda *djaoro* considers all the new clearings to fall under his authority. He is the only one of the three *djaoros* with an official status. In the course of 2000, the Yameda-*djaoro* paid for and succeeded in obtaining his official chieftaincy papers from the authorities in Moulvoudaye.

At the time of the interviews (June-July 2001) Yameda together with its brother settlements Domo and Gwar consisted of 38 households, counting approximately 220 persons.

Box 5.2 History of the Pilot Project Mindif-Moulvoudaye

In 1978 the Mindif area became the focus of a project to improve the production and integration of pastoral and agricultural activities, and to stop the degradation of natural resources[126]. Recognised tensions over grazing and declining bush and soil quality made a US-based donor (USAID) come up with an integrated plan in co-operation with the Cameroonian government. Apart from, for example, crop rotation implementation and the introduction and testing of higher yielding crop varieties, the plan consisted of the installation of land zones (blocks) for controlled grazing during the wet season, meaning that in each block divisions could be used in sequence and rested alternately. In the then sub-department of Mindif (divided into the two sub-departments of Mindif and of Moulvoudaye after 1979) three pilot areas of approximately 5000 hectares each[127] were delimited where subdivisions allowed sequential grazing. These were for use by inhabitants of the region only, meaning that nomads were excluded. Several cattle owners lived in the region and only sent their cattle away with sons or herders during the dry season, thereby retaining their rights of use. The real nomads did not have any other options than to leave and to install their rainy season camps just outside the Pilot Project areas, for example just south (direction of Horlong and Kaélé), or even in a totally different region. Chad was one of the refuge areas. Amazingly, they did not even protest against the rules of this project. "We do not own the land, so others can decide to use it." Nowadays they say that in those days they had enough other possibilities[128].

Because the project was aimed at involving local people, each block was managed by a local council. Like colonial powers before, project organisers used incumbent, 'traditional' authorities to create these councils, with the result that only Fulbe authorities got a say in project implementation. This explains the bias during implementation of the project towards pastoral activities and the neglect of both the integration of agricultural and pastoral activities as well as agricultural improvement as such (Van den Berg and Van Est 1991; Van den Berg 1997: 90). One can say that, during the project period and some time thereafter, the cattle owning Fulbe elite 'captured' the possibilities and resources available, to the detriment of both nomadic cattle keepers and agriculturalists. They did not, however, encourage good management of their pastures

[126] Annex I of the Project Grant Agreement, 3 April 1978: "[The goal of the project is] to intensify and integrate livestock and agricultural production in the central plains of the north while at the same time halting and eventually reversing the current degradation of the range and agricultural lands." Later, the "improvement of the socio-economic standards of the rural population" was added (Annex I of Amendment No. 5 of the Project Grant Agreement, 15 July 1982). See Ithaca International (1984).

[127] The whole project consisted of 250,000 ha in the Mindif-Moulvoudaye region and a complementary grazing area of 96,000 ha in the Yaéré of the Logone near Zina (Van den Berg 1997: 89).

[128] Interviews in the bush area of Kolara, Kobo and Daram June-July 2001.

during that time. Several times Van den Berg and Van Est (1991: 34) mention traditional authorities who "did not respect the grazing discipline".

Although the project did not achieve the desired results and ended in intense discords between USAID and the Cameroonian authorities in the mid 1980s (Van den Berg 1997: 90), it did have some spin-off for the region. The most important of these was the preservation (for the time being) of the bush areas on the one hand, as agriculture in the grazing blocks was prohibited and the number of cattle did not increase as quickly as it would have done if access had been open to nomadic herds. On the other hand, the project resulted in the formation of artificial water points, and an increase in the number of cattle of local inhabitants (Van den Berg 1997: 90-91). The cultivation areas outside the project zones, however, suffered from more intensive use and shorter fallow. In contrast to the theory of Homer-Dixon (1991, 1994, 1999) that resource capture by elite can lead to violent conflict, both agriculturalists and nomadic cattle keepers did accept the privileges of the settled cattle-owners without any obstructions or official complaints.

After the withdrawal of USAID in 1985 (Van den Bergh 1997: 90), the Cameroonian project leaders continued the project officially until 1993 but it actually went on, at least in some shape or form, until the end of 1999. After the expiration of the official project period the number of cattle increased rapidly. This was because nomads returned with their herds and urban based cattle owners from, for example, Maroua, made their herders drive the cattle to the (temporarily) improved pastures of the project grazing areas. For people living in the neighbourhood of the grazing blocks, the reality of the restriction on agriculture applies even now, especially when the local (traditional) authorities involved stick to the old rules or even try to extend them to non-project areas and villages. On the other hand, all inhabitants of the Diamaré (and wider area) know of the official ending of the project, and for them this has opened up possibilities to look for new land.

Now the pattern of settlement is clear, I will describe the reasons in the different domains for, first, the settlement in the Kolara neighbourhoods. Subsequently, I will come to the reasons of invasion of the bush. In general, insecurities of both 'stayers' and 'go-ers' may be the same, but they encounter differences in the implementability of and motivation for options.

5.4.2 Reasons for intrusion in the environmental domain

The physical basis of the environment in the receiving area

The plain of the Diamaré between Mindif, Moulvoudaye and Guiduiguis (Figure 5.2) is built on a substrate of volcanic, metamorphic rock which is difficult to traverse. For example, constructing new water points to reach the well-filled aquifers that flow from the west to the east (Boutrais 1984: 52-58) almost always requires large mechanical equipment. Sometimes the rock layer almost reaches the surface and then even planting trees is difficult. On top of this rocky under-layer several sediments have been deposited. The most obvious of these are: first alluvial sand and heavy clay during the period that the outer banks of Lake Chad extended to this point[129]. The second deposit is formed by colluvial sands eroded from the inselbergs and rock outcrops.

[129] More to the south-east some sand dunes can be found from the period Lake Chad extended to this point. This resembles the Tupuri heartland aspect (see section 2.1).

According to De Steenhuijsen Piters (1995: 43-48), four major soil types can be distinguished. Roughly one quarter of the surface consists of Vertisols, with a high clay proportion and a vertical construction, developed in the Lake Chad era. These soils are difficult to cultivate and have very poor drainage characteristics. Even though this is a set-back for rain-fed cultivation, it makes them perfectly suitable for transplant-sorghum cultivation. In the Vertisols, good water-retention capacities go together with high intrinsic fertility.

In addition to these Vertisols, Brabant and Gavaud (1985) claim that the rest of the soils in the Diamaré here are Planosols, with "stagnic properties and abruptly overlying a slowly permeable horizon within 125 cm of the surface". Yet, De Steenhuijsen Piters (1995: 44) at best only finds Planosol-like soils that sometimes have an "abrupt impervious clayey horizon at 40 – 80 cm" depth. Despite the poor drainage, shallow root development and sensitivity to drought spells, these soils can and are used for rain-fed cultivation (De Steenhuijsen Piters 1995: 58).

The third soil type found in the Diamaré is that along ephemeral rivers: the Fluvisols. Depending on the position with respect to the current, these soils have a (variously coarse) sandy to clayey texture in which the original inhabitants of the plain, the Mundang and Guiziga, are used to planting trees and root crops, such as cassava.

The largest part of the area is occupied by Cambisols that make good agricultural land. Of these, the less frequent sandy-clay type is the most preferred, because it has good porosity and is slightly more fertile than the clayey-sandy type, called *Yoldé* by the Fulbe. However, both types have a low organic matter fraction and low phosphorus content. Both soils are liable to loss of fertility because of their low intrinsic fertility and low cat-ion exchange capacity (De Steenhuijsen Piters 1995: 46). Moreover, both types, but especially the sandy-clayey one, are vulnerable to over-use with resulting crust formation and superficial loss of good hydrological properties because of their high fine sand fraction. These so called '*hardé*' develop in case of continuous over-grazing by cattle. They are characterised by a decrease in organic matter, a loss of structure and alkalisation in the surface areas. A lot of manure combined with ploughing can restore the *hardé*.

In general, the fertility of the region is not only a pull factor for Tupuri. Almost all sandy-clayey Cambisols and a lot of Vertisols are already under permanent cultivation. Settlements used to be at locations in which these two soil types, but especially the first, could be found. This happened even more in areas close to seasonal rivers (both for water and for the possibilities of the planting of orchards and root crops).

On the remaining Vertisols, as well as on the clayey-sandy soils and colluvial soils that are considered infertile[130], there are savannah shrubs and trees with, in the rainy season, herbs and grasses: the so-called 'bush'. Parts of the bush are indeed *hardé*, the overgrazed and crusted sandy-clayey soils. There, almost no vegetation can be found: bare spots of (sometimes) up to a hectare between the vegetation[131].

Climatic circumstances in the Diamaré plain of Kolara and Kobo are slightly less favourable than in the Tupuri heartland. Precipitation is markedly lower, as the studied bush

[130] Or only suitable for groundnut cultivation (De Steenhuijsen Piters 1995: 47).
[131] See, for example, Moritz (1995).

area is situated in the 700 – 800 mm per year precipitation band[132] and the heartland in the 800 – 900 mm per year precipitation band (L'Hote 2000: 19; see also Fig. 5.4). Although there is a significant lack of data with regard to the precipitation in the area[133], a rough comparison with the heartland is shown in Table 5.4.2.

Table 5.4.2 Comparison of year precipitation between heartland and Kolara – Kobo (in mm/year)

	1997	1998	1999	2000
Kolara	n.av.	n.av.	836	643
Kobo	646	865	643	n.av.
Doukoula	857	n.av.	811	691
Tchatibali	883	1049	960	661

Both in Kolara and Kobo, the rains mostly start in May, while in the heartland the onset of the rainy season is in April[134]. In general, Kolara inhabitants state that Kobo suffers more from lack of rain. They explain it by referring to the nearness of the river(bed) and a larger number of high trees in the village centre that attract the clouds. Table 5.4.2 indeed shows a big difference between the precipitation in Kolara and Kobo in 1999. Also in June-July 2001 Kolara neighbourhoods received some rain (albeit not much) while Kobo-bush remained totally dry (personal observation). However, the small amount of data for the Kolara and Kobo area makes a conclusion impossible.

Land availability

As stated in the colonial reports[135] Tupuri (and others) came to the Diamaré because of the abundance of *Karal* fields: a Fulbe term for the rich transplant-sorghum fields. Indeed, personal information from respondents confirmed that push-reasons to leave the homeland were often the seeking of land or food. Table 5.4.3 summarises reasons for leaving the homeland for fathers and grandfathers of respondents as well as for their sons and brothers. In this table the figures of fathers and grandfathers of Kolara provide an indication as to why people came to that village, while those of sons and brothers and (grand)fathers of the heartland explain why people left those villages.

Thus, as far as Kolara inhabitants are concerned, the push factors which caused people to leave their homelands are clearly related to the fertility and surface of arable land in the origin regions. The push factor for the ancestors of Sirlawé and Tchatibali-inhabitants cannot be deduced from the table. Some respondents there can tell family histories about the origin of their great-grandfathers and the reason for them to have left their origin regions (in Chad).

[132] During (approximately) 1985 – 1995, year means on surrounding pluviometric stations were as follows: Guidiguis: 795 mm; Touloum: 785 mm; Moulvoudaye: 725 mm. The yearly mean for Mindif between 1975 and 1995 was 785 mm (L' Hote 2000:19).

[133] Both in Kolara and in Kobo a SODECOTON agricultural extension worker has the task of monitoring the precipitation. The data, however, was submitted to the SODECOTON headquarters in Maroua where it was processed into regional means. Thereafter, the local data was destroyed. Data given here is the only data that could be retrieved.

[134] This information is based on real precipitation data when available. It is confirmed by the personal information of respondents.

[135] Texier (1937) in Mohammadou (1988).

More often than not these are anecdotes about daring heroes that withstand the difficulties of climate and enemies to demonstrate their bravery. Only scarcely an over-populated home-area is depicted, with too many brothers who had to share too few acres of land. Most of the time, the only reason to go was "he wanted to". "He was a Tupuri, so it was in his blood"; a reason also given by several present day migrants.

For the last two generations the push factor for leaving Tchatibali is clearly related to the available area and the fertility of the land, in spite of the (few) employment opportunities in the SODECOTON factory or in the bars and restaurants of this town. As shown above, land scarcity is indeed more pressing in Tchatibali than in Sirlawé. The push factor is less clear for Sirlawé and Kolara, at least for the sons' generation. In Sirlawé the youngest generation obtained a lot of jobs outside the village, perhaps due to their generally higher level of education. The data for Kolara is too low to draw any decisive conclusions.

Table 5.4.3 *Percentages of persons with certain reasons to move away* (based on interpretation of respondents; rest percentages are unknown; higher than 100 % is due to more reasons per person).

	Sons gone		Brothers gone		Reasons to go	% of sons with certain reason to go[c]	% of brothers with certain reason to go	% of fathers with certain reason to move	% of grandfathers with certain reasons to move
	%	% of fam[a]	%	% of fam[a]					
Sirlawé	12	18	34	54	Insufficient surface[b]	4	34	14	23
					Infertile surface	4	7	9	20
					Other	65	71	29	25
Tchatibali	9	17	20	59	Insufficient surface	9	30	1	2
					Infertile surface	26	5	1	0
					Other	44	55	26	6
Kolara	8	14	29	62	Insufficient surface	0	10	35	8
					Infertile surface	0	22	27	8
					Other	46	32	46	11

[a] = not all families have sons or brothers who went away. Here the percentage of families with such sons or brothers is given
[b] = this means "insufficient arable surface"
[c] = the percentage is of the number of people who left

Pull factors for the Diamaré are related to the push factors that made people leave their region of origin. Migrants chose Kolara because of the good agricultural possibilities it offered, related to the option to clear new fields in the bush[136]. People mention the importance of having the permission of the neighbourhood chief and *lawan*.

When fertility in the original Kolara neighbourhoods declined and new clearing possibilities diminished people moved on to, for example, Yolawo[137]. From the compounds, especially

[136] 78 % of fathers and 52 % of respondents themselves mentioned "good agricultural possibilities", "land abundance", and "land fertility" as a reason to come to Kolara. At least half of them came to join a friend or relative, or had "heard" that it was good to cultivate here. Almost the same percentages indeed came to clear fields.
[137] Nearly 60 % of respondents declare that they or their fathers had these reasons to move from a former neighbourhood of Kolara into Yolawo.

those of Yolawo, it is still possible to reach bush zones where clearing is allowed. "As long as you do not traverse the road", everybody says, "the *lawan* does not oppose new clearings"[138]. The newer fields in the neighbourhood itself are not yet (totally) exhausted. As a result, in the newer neighbourhoods almost everybody has at least some fertile fields. In other neighbourhoods of Kolara this number has declined to only half of the farmers. The vulnerability for drought is higher in less fertile environments. In the beginning of July 2001, when the rest of the village suffered from stagnation in the rainfall, the maize and sorghum plants of Yolawo were relatively high. "Our plants are already high enough not to suffer too much from this periodical stop in the rains. That is because of the high fertility, and therefore the good humidity of the soil[139]. Thus, here in Yolawo, we can cope with the low rainfall", the neighbourhood chief and some other respondents explained.

In spite of the good perspectives described by the Yolawo inhabitants, many long-time Kolara inhabitants or those that are just arriving see a high population density in the original neighbourhoods. Most of them wonder where they can find additional surface to cultivate, where to find fields for their grown-up sons… Many persons welcome the new possibility of bush settlement. Some indeed express their wish to leave (for the reasons depicted in Table 5.4.4, where also their surface of arable land is given), although as yet they did not go (referred to as 'persons wanting to leave'). Others moved into the bush area. Also their surface of arable land in the home areas is given in Table 5.4.4.

Table 5.4.4 *(Potential) migrants access to arable land, fertility status of these lands in the places of origin and reasons to leave* (sometimes higher than 100 % due to more categories per person)

		Surface of owned land per household (in ha; mean and range)	Fertility status of owned-land (% of persons withthat idea)			Reasons to leave (% of persons with that reason)			
			Good	Moderate	Bad	Searching land	Hunger	Conflict over land	Other job
Persons wanting to leave	Heartland (n = 27)	1 (0 - 2.3)	8	38	63	74	4	7	30
	Kolara (n = 5)	2 (0 - 4.3)	50	75	25	80	40	0	0
Bush settlers	(n = 36)	1.4 (0[a] - 7.1)[b]	8	11	44	81	3	0	0

[a] = 19 % did not have any land; 60 % thereof considered the fields they could borrow or hire as infertile (all in the original area)

[b] = 28 % complained specifically about the very low surface of *karal*-fields

None of the bush-settlers had any opportunity to enlarge their surface in the village of origin, as the numbers of brothers to share with was high and bush was not at hand. Eight respondents (= 22 %) mentioned the high number of sons for whom they have to guarantee fields in the future. Buying is almost no option, because no sellers are present (see above sections). Most

[138] As stated earlier, several inhabitants alongside the road did cross it to start cultivation on the "project-side".

[139] This remark shows the knowledge of the inhabitants of the relation between a high organic matter fraction in the soil and soil humidity.

people refer not only to a general lack of field-surface at the place of origin but specifically to a lack thereof in the hands of friends and relatives, so borrowing is also no option. If it were possible to buy or hire at all, the settlers mostly belong to the poorer part of the population. Thus, neither hiring nor buying fits within their financial means.

The financial threshold for hiring or buying was extra high because the fertility status of the available fields was such that there was a big risk of not regaining the money with the yield. Even 60 % of those with a field area that theoretically should have been enough to feed their family (2.2 ha or more)[140] mention a failing production due to infertility. Those with more than 1.5 ha for transplant-sorghum or more than 1 ha for rainy season production also referred to the bad status of those fields.

Fertility and yield improvement

Enhancing the field quality with the help of manure from own animals was only a possibility for a small number of respondents now living in a new settlement. A smaller number still had the opportunity to borrow manure form other people's animals (see Table 5.4.5). Surprisingly, those were not persons with a high arable surface and no animals themselves.

Table 5.4.5 Livestock ownership of migrants and use of animal manure in origin region

	Cattle numbers owned			Small ruminant numbers owned				TLU owned				
	1 - 3	4 - 6	7 - 10	1 - 3	4 - 6	7 - 10	> 10	0	0.1 - 0.6	0.7 - 1.3	1.4 - 2.5	> 2.6
No. of owners (n = 26)	7	0	2	11	3	6	3	10	12	6	5	3
No. users manure own animals	0	0	2	0	0	1	2	n.a.	0	1	0	2
No. users manure borrowed animals	2	0	0	0	1	1	0	1	1	2	1	0

For most of the respondents the reason for the lack of use of manure becomes clear, namely a lack of fields, a lack of animals or a lack of both. Sometimes persons with livestock used the manure even when they did not have a large area to cultivate. For example, two people with 7 cattle each also have more than 20 small ruminants[141] and, indeed, they use(d) their animals' droppings to improve the fields: one time the fields of the father and in the other case one small field of only 0.5 ha.

Of the six persons with both more than 1.1 ha of surface and more than 0.7 TLU (see Table 5.4.6, the nine squares in the lower-right corner) only one used his animals' manure. Why the manure of a flock of seven small ruminants or more or that of one cattle or more is not used on badly infertile rainy season fields remains a mystery. It is perfectly possible to gather the manure at night when the animals are locked up during the rainy season, and even at the end of the dry season when extra fodder has to be given, although the latter would require extra

[140] The mean family size of the settlers is 8.6 persons. With 0.25 ha per person they should have enough (Dietz *et al* 2001).

[141] A TLU of more than 6.9.

labour (at a moment that there is plenty of it). It is also possible to attach the animals on the fields just after the harvest, let them eat the stubble and feed them extra if necessary[142].

Table 5.4.6 Numbers of settlers with a certain arable surface in the origin region versus TLU ownership

	Arable surface (in ha)					
TLU	0	0.1 - 0.25	0.26 - 1.0	1.1 - 1.5	1.6 - 3.1	3.1 - 5
0	2	1	4	1	1	1
0.1 - 0.6	3	0	0	2	6	2
0.7 - 1.3	1	0	0	3	1	0
1.4 - 2.5	1	2	1	0	1	0
> 2.6	1	0	1	0	1	0

Other ways of improving the fertility of fields were not widely implemented. Eight persons use(d) some sort of chemical fertiliser on their sorghum fields, half of which was in fact for cotton fertiliser, bought from SODECOTON. The real sorghum fertiliser had five different sources. In addition, only two people used stems of harvest left-overs and leaves of wild trees (standing in the fields).

To increase labour input, half of the respondents in the settlements used ploughs, mostly in their own possession (see Table 5.3.3). In the heartland, a lower percentage of those that wanted to leave owned ploughs[143] than of those who indicated they wanted to stay. In Kolara there was no difference between the two groups. The settlers used (and owned) less ploughs than the other groups (see Table 5.4.8). Only the heartland people that wanted to leave had less. This is partly due to the fact that several shop and bar owners from Tchatibali are incorporated in this group. Because the use of ploughs (and especially ploughs that are always available, such as one's own ploughs) helps to shorten labour time per ha, those with access to ploughs are better off. With the bad rains of the last years they had the possibility of sowing a larger area at the right time, thus increasing proving yields. Nevertheless, because the farmers could not use the free labour to invest in more fields, from this perspective it did not improve the total yield. Therefore, the possession of ploughs caused a bigger wish of accessibility of more fields. On the other hand, those that worked by hand wanted to acquire some more wealth in the new settlement area to enable them to buy a plough.

All respondents, both those who considered leaving the origin villages and those who had already moved, tried to acquire high yielding or - better still - quicker maturing varieties. However, the supply thereof is quite meagre and arbitrary. There seems to be no difference in supply between the bush settlements and the older Diamaré villages. Most of the time people cannot wait to sow until those seeds finally arrive.

In short, with regard to environmental factors, people who chose to invade the bush had to calculate the costs and benefits of, on the one hand, an abundance of still fertile lands, especially for transplant-sorghum but also for rain-fed sorghum, combined with a lack thereof in the origin villages. Indeed, on average the settler families had the lowest arable surface at their

[142] This can be done with fodder gathered from the bush (in the Diamaré), or with dry leaves from beans etc.
[143] And fewer of them used ploughs, although with a lower difference.

disposal of all the different categories of the study (see Table 5.4.7). Because the settler families are relatively young, for them the expected surface area per person could only decrease in the future (see also section 4.3).

Table 5.4.7 Disposition of arable surface (in ha) in origin villages of different categories

	People wanting to leave			Total	
	settlers	Kolara	heartland	Kolara	heartland
Per household	1.4	2.0	1.0	3.83	2.34
Per person	0.16	0.40	0.23	0.36	0.26

On the other side of the equation, the vulnerability for droughts and the quick ageing characteristics of the soil are a setback, especially when the enormous amount of work in clearing the bush from its decennia-old trees and brushes is taken into account. Also, people know that the production of the soils after clearing will not reach its full potential until three or more years have passed. Thus, they have to get through some difficult years. In addition, non-bush inhabitants of the Diamaré consider the bush area as a very dry spot with almost no rain, no rivers and no water points[144]. Constructing the latter is almost impossible because of the rocky substrate. Another risk in the bush (more than in the more populated villages) is the occasional arrival of elephants that destroy the whole yield[145].

5.4.3 Reasons for intrusion in the human domain

With all the costs as mentioned above, the decision to go to the bush is a difficult one. For that reason only a small proportion of those who want to leave their villages consider the bush a good option[146]. Only those families that have young household heads and thus the strength to withstand the extra workload, combined with the certitude of diminishing possibilities in the homeland because of a growing family size, will make the effort. Indeed, the mean age of household heads of settlers' families is almost ten years lower than of those in the heartland villages and Kolara. That the wish to move at all is connected to younger (and thus more ambitious) men and women in general can also be seen from the low mean age of those that expressed their plans to leave: 33 years versus 48 years in the whole villages.

Settler families are in general healthier, with fewer health problems than the other ones. This is a positive feature, especially in the bush, where there are no health services at all. The young men and women in the bush refer to the abundance of traditional medicines around them. "My little girl had stomach aches yesterday but I only had to take five steps to that tree over there to peel the skin and boil a curing drink with it. You would not find this tree in the village."

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144 Within the settlements this is considered the biggest problem. Water has to be fetched in Gesai, 10 km away.

145 Several respondents in neighbouring settlements mention their encounters with these big mammals that destroyed fields and crops. Six out of 35 respondents actually suffered own crops to be destroyed by elephants. See also Van der Ploeg (2001); Zwaal (1995) or Tchamba (1996).

146 Three out of five people in Kolara indicate the bush as a region to go to. In the heartland nobody refers exactly to the Diamaré bush although six out of 27 persons mention different Diamaré villages in general.

On the other hand, water and sewage hygiene are non-existent in the bush. Both the construction of wells and the digging of latrines is difficult because of the rocky underground. In spite of that, government agencies have already discovered that this remote place is a source of revenue. In April 2001 they stated that if the village had not built latrines within a couple of months, each family without one would have to pay. So the new inhabitants discussed between them how much money was required to buy it off. Country-wide corruption became prevalent almost before the new settlers had arrived! Beforehand, nobody could have counted on that happening.

Being more daring and more ambitious may also be influenced by education. As Tupuri themselves say: "Education opens your mind. It makes you see more options." Indeed, the percentages of people who attended primary school are higher for the settlers than for the origin villages. However, the reverse is true of the percentages for secondary school attendance. In the settlement, only three percent of the household heads visited more than primary school. In total the number of persons that visited a school is more or less the same[147]. It seems as if a lower level of education has made people not only decide to move but actually to do so, while a higher level makes people more frustrated (that is why they express the wish to leave their home-village), but indecisive as to where and when to move.

With regard to the schooling of children, it is difficult to make comparisons because the settlement population is younger than that of the origin villages and thus a larger number of their children are of pre-school age. The exact age of children is difficult to estimate because many parents do not know how old they are and children of the same age can differ greatly in outward appearance. Also, different fathers regard 'school age' in different ways. Some fathers send their sons to school when they are barely five years old while others make them herd the cattle until they are ten years old. Secondary school attendance by children is in particular far lower at the moment in the settlements[148], but again, this is certainly due to the low age of the children. Fewer of the children of those who want to move attend school than of the three villages in total (40 % versus 55 %), but then again this group is younger than the average age of the whole villages population. Because all household heads indicate that they will send their children when they are old enough[149], future school attendance numbers of children will increase, especially for those that indicate their wish to move. For the settlement inhabitants school will become a problem because children then have to walk long distances. As a result, those parents that regard school as a necessity (perhaps more so if they themselves have a higher level of education), can have problems with the remoteness of the settlements.

One of the negative conditions that was incorporated in the cost-benefit calculations of new settlers, namely that less information would reach them, proved to be unfounded. Already several governmental and NGO extension workers have discovered the new hamlets and provided information on the curbing of erosion, how to plant fruit trees and, as stated above, on how to construct latrines. People consider themselves lucky here: old and new methods of agriculture and the knowledge thereof are easily available.

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[147] Only those Kolara inhabitants that wanted to leave have a 100 % school attendance, but the number is low.

[148] 6 % versus 26 %.

[149] I think these are "desired answers", meaning that parents give the answer they consider the most appropriate, and not the truest. But perhaps they believe it themselves and indeed want to send their children, but perhaps they will not be not able to do so.

5.4.4 Reasons for intrusion in the economic domain

Whether or not wealth or the lack of it can form a trigger to leave a village and invade the bush remains to be seen. An indication of wealth can be offered via the ownership of cattle and ploughs: Table 5.4.8 gives a picture of the wealth of the different categories to make comparison easier. Indeed, a lower percentage of settlers has ploughs, cattle and small ruminants. They also have fewer donkeys than the donkey village of Kolara. In short, although they explain that for moving you need a lot of money (for example to rebuild the compound, to buy transport etc.), the settlers are (and were) in general poorer than the people that stay behind (and not because they sold their animals or ploughs).

Table 5.4.8 *Livestock and plough ownership and use by different groups of respondents* (percentages of group)

		% of households using ploughs	% of households having / using cattle			% of hh. with small ruminants		% with donkeys		% with horses
			1-3	> 4	Draught	1-3	> 4	1	> 2	
Heartland total (n=143)	Own	43	16	29	36	14	66	0.7	0	3
	Hire	13	0	0	20	0	0	0	0	0
	Borrow	17	0	0	18	0	0	0.7	0	0
Heartland wanting to leave (n=27)	Own	30	19	15	19	15	59	0	0	4
	Hire	15	0	0	19	0	0	0	0	0
	Borrow	22	0	0	19	0	0	0	0	0
Kolara total (n=37)	Own	52	14	30	27	14	54	73	14	14
	Hire	5	0	0	0	0	0	0	0	0
	Borrow	3	0	0	0	0	0	0	0	0
Kolara wanting to leave(n=5)	Own	60	0	0	0	40	20	40	20	0
	Hire	0	0	0	0	0	0	0	0	0
	Borrow	0	0	0	0	0	0	0	0	0
Settlers (n=36)	Own	39	33	6	14	31	33	22	6	0
	Hire	3	0	0	3	0	0	0	0	0
	Borrow	8	8	0	8	0	0	0	0	0

Surprisingly, inhabitants from Kolara who want to go away, own more ploughs than the average inhabitant; 60 % have donkeys but none of them have cattle. Therefore, the extent of their wealth is disputable[150].

With regard to the keeping of farm animals, the bush offers more opportunities to graze them. The fact, though, that settlers in the bush are poorer as far as farm animals are concerned makes it clear that they did not seek this pasture option when they came to the bush. The reverse is even truer: in the bush the risk of cattle theft or losing livestock because they get lost in the undergrowth is quite high. Some cattle owners have (as yet) left their animals with fathers or brothers outside the bush. The lack of veterinary services and medicine may also have made them take this decision, but this fact in itself did not make them refrain from seeking a new settlement.

[150] Here, we have to remember that cattle-keeping used to be part of the Tupuri culture. When people do not have them, this is certainly a sign of poverty.

Apart from the poorer position in general, and specifically that regarding ploughs, the lower field availability and the reduced fertility of these fields formed a mayor setback for cash crop production. It means that settlers had fewer options to earn a living or at least an additional income from cotton or other crops in their home villages.

An economic consideration that pulls people to the bush is the fact that material for home industry is abundantly available just two steps away. Although, to sell it they have to walk long distances. Yet, the production of mats, granaries, brooms, etc. becomes so easy that the transport is no problem in comparison. People do not even count it, as they have to go to markets anyway to purchase indispensables and to meet other people. Naturally, this takes time, but they can choose to postpone the task until the dry season, when labour time is not a problem.

Of course, of those who stayed behind, some had additional income sources, sometimes other than farm jobs. Opportunities for the 'movers' to obtain such jobs differed. Of all those who wanted to leave, nine percent earned a substantial part of his income from another job. But, they explained that this only provides for a small salary, which is also not at all secure. They preferred to farm somewhere with more (fertile) fields or to move with their shop (for example) to the city, where there are more potential customers. Some work demands a higher level of education than primary school level and, as has been stated, settlers do not have a very high level of education. None of the new settlers abandoned another primary income source or the possibility thereof to move to the bush. The fact is that they did not see any other possibilities to obtain such jobs in the future. According to them the situation with regard to off-farm jobs was very insecure and was set to deteriorate further.

5.4.5 Reasons for intrusion in the social domain

The social position of settlers was (and is) no better than that of their co-villagers in the regions of origin. Belonging to a poorer segment of the population and without a big herd to use as a source of (pay-off) gifts, climbing up through the social hierarchy is almost impossible. They could have invested in the organisation of social institutions to improve the general position of the origin village, but then again their low social position would have hindered this. Even if such institutions could have been implemented, it would have taken a longer time than they were prepared to wait. Now the Project Mindif-Moulvoudaye has ended, the bush looks enticing and "you need to be there before others. Otherwise only the lesser fields will remain, or you will again acquire only a low position in the new hamlet". Those who arrive first acquire a higher status.

Although the *lawan* of Kolara still tries to implement some of the project rules, especially the most important one, namely inhibition of encroachment[151] - because he wants to preserve the bush for cattle grazing[152] - he is almost powerless. The settlers know this. It seems as if only State law regarding land tenure is important and that law backs the settlers although, strictly speaking, State law also calls for forest protection and is therefore opposed to bush clearances (see chapter 4). In addition, authorities that see the importance of bush protection are indecisive: they say "No", but they do not do anything to counteract encroachment. To them as well,

[151] He indeed refers to this rule when talking about the gradual disappearance of the bush.

[152] He is one of the biggest cattle owners of the region. In addition, as the chief of the land and with almost as high a position as the Mindif *lamido*, he receives payments of nomads to safeguard their interests in the bush.

State laws are not totally clear[153].

Thus, settlers turn to those authorities that give them permission to invade the bush. The *lawan* of Kobo, for example, does not oppose new settlements. Although he stresses the importance of grazing lands for both nomadic and sedentary cattle owners, he declares that "nobody is able to stop Tupuri from creating new settlements. Not the sub-prefect, not the police, not even the prefect, so why should I try?" An increase in numbers of Kobo citizens means a higher (tax) income and a better position for him in relation to other authorities[154]. In addition, he is personally interested in clearing the bush, because he shifts his fields the moment they become infertile. He himself started new fields at the entrance to Kobo village (former project land) three years ago. In addition to that he has approximately one ha at each of four new settlements in the bush.

Yet another social reason plays a role in bush settlement. Some settlers did not come in the first place because of the fields. They had social problems in their village of origin, had quarrelled with village chiefs and were sometimes accused of witchcraft. In a new surrounding, with people from different origins, old stories have no meaning so they preferred to start a new life in the remote bush.

5.5 Assertion of rights: Box 3

As we have seen above, reasons to invade the bush area are sometimes at the same time claims to the bush. Tupuri refer to their customary rights[155], to the emptiness of the bush in general and to State law and historical rights related to that in particular. Without an official categorisation of bush land (that is 'national land') to be forest land, for example, the official State law declares that the user rights of national land fall to those that develop it. In addition, new Tupuri settlers do not donate legitimacy to the land master title of the *lawan* of Kolara. According to their customary laws, the master of the land is he who starts clearing an 'empty' space and founds a settlement. In addition, the 'land master' according to the State law is the nearest sub-prefect. So, at best and when he backs them[156] Tupuri refer to him. Last but not least, they reinforce their claim by not acknowledging the presence of other users (and thus denying them their rights).

In general, the Diamaré pulls at migrating Tupuri because of the nearness of the area. This also underlines their claim. There is no "non-Tupuri land" between their region of origin and this "empty space": it is the next step in the moving frontier. What is more, it is not the next step but rather a step already taken. They perceive this region as 'their' land, from which the Fulbe have driven them. "The [Tupuri] have controlled a much larger area than their current space, stretching out from the current Massa territory along the Logone, via the current district of Guidiguis, to the Mundang region of Lara in the West." (Boulet 1984: 140). Feckoua (2002:

[153] The higher level (regional) authorities gain financially by a continuation of the conflict, because conflicting parties have to buy their involvement every year.

[154] See Fisiy (1995).

[155] Customary law should have its place in the whole legal system, according to Cameroonian laws (see ch. 4).

[156] As in the cases of the three study settlements that get their authorisation from the sub-prefect of the involved sub-department (Moulvoudaye).

3) also includes Kolara, Horlong and Daram in "the traditional Tupuri land". Indeed, many Tupuri clan and family members have already preceded the settlers in the direction described. When the French colonial masters had succeeded pacifying the centre of the Far North Province around 1930-1935, Tupuri again started to come to this area. In short, Tupuri do not perceive their shift to the Kolara and Kobo bush as an invasion of other people's 'niche'. Even those that do not refer to age-old rights highlight the right to clear fields in the "empty" bush. This corresponds perfectly with their customary rules. Moreover, after the year-long Pilot Project Mindif-Moulvoudaye, nobody is using the described area.

> *"I have been watching the bush for years, but was not allowed to use it. Now I am going to use it like my ancestors did before me. When somebody clears a forest that is nobody's, afterwards the land is his. Do you see any signs of habitation here? So it is clear, isn't it?"*[157]

Apart from expressing their claim to the members of their own ethnic group, to outsiders and to encountered cattle keepers, the settling Tupuri voice it to authorities. In the complex Cameroonian situation of different chiefs, they choose the parties that are, or have to be, on their side, and they ignore the chiefs and civil servants that may come up with counter arguments. Referring to the Cameroonian land laws they not only claim their rights to the bush in talks with the sub-prefect, they also claim that it is his duty to protect their lifes, homes and fields there.

And they succeeded with this strategy. Although the sub-prefect of the region declared to the herders that he did not want any new settlements in the bush[158], he did not do anything to implement this decision. On the contrary, he allowed new settlers to come in, he allocated chieftaincies for new settlements and, last but not least, it turned out he himself obtained fields in the newly cleared areas[159].

5.6 Counter-assertion and conflict: Box 3

When Tupuri settle in the bush area and claim it to be their right, there would be no problem if other users would withdraw and acknowledge this right straight away (or if there weren't any other users at all). From the explanation above (section 4 and 5), we can conclude that the invading Tupuri themselves do not have the intention to withdraw again (except perhaps some individuals who cannot cope with the water shortage). They even do not have the idea that they invaded somebody else's area[160].

However, they did (and do) invade someone else's area. The pasture is already in use by several others. With the onset of the rainy season cattle keepers in the Yaéré floodplain escape the incoming water and the accompanying flies and search the higher and dryer lands of the

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[157] This is a free medley of citations from several respondents in the settlements of Domo and Yameda. With such remarks they deny the existence of nomad camps in the bush.

[158] When some of the herders came to him in 1995 to complain about the occupation of their campsites, he stated that the cultivators could stay until after the harvest (otherwise it would be a loss of effort and seed), but that afterwards they had to leave.

[159] See also Van der Ploeg (2001: 40).

[160] With that this situation is slightly different from that suggested in the VoE diagram, but it only makes the case more clear. With their perception of ownership of the bush, their claim of rights becomes stronger.

Diamaré between Mindif, Guidiguis and Moulvoudaye[161]. Most of these 'other' users do not withdraw either. On the contrary, the moment other users spot the new settlers, they also start to claim the bush as theirs. Then, when both (or more) parties continue to underline their access, use or even ownership rights to the same piece of land, a conflict situation arises (Box 3 of the VoE diagram). Thus, to make it possible to define the situation as a conflict situation, more has to be known of the counter-party's perceptions, options and actions.

In this case, the 'other users' are made up by a wide range of cattle herders. They fall into three sub-groups. Using ownership of the herd as a denominator, the first group consists of cattle owners of the Diamaré villages. These can be called 'local cattle owners'. The second group consists of all the different cattle nomads who use the Diamaré as a rainy season resort. Most, if not all, of them find their dry season grazing lands in the Yaéré floodplain of the Logone. The third group consists of rich cattle owners in town (for the Diamaré this is mostly Maroua or Kaélé), who send their cattle with paid herders into the grazing lands. Most of these paid herders are the sons of village cattle owners or of nomads.

5.6.1 History of the pasture lands

Before 1978, the whole region was occupied by an extended bush in which cattle keepers (nomadic and settled) could herd their livestock and in which new cultivators could start fields. Many people claim that in former times the Diamaré plains of Mindif could be used for cattle grazing all year round. Whether or not that is true (after all, water availability is a problem), it was big enough to combine different types of use.

When the project 'Mindif-Moulvoudaye' began (see Box 5.2), agriculture was prohibited in a large part of the area for. From 1978 to 1993 (or longer) the 'Kolara grazing bloc' was exclusively used for cattle grazing, with the exclusion of cattle of nomads. The number of cattle did increase, however, because "[the project] has encouraged local herdsmen to herd the cattle of large owners from Mindif and Maroua" and "cattle owners [from a large surrounding region] lead their large herds towards the project zone." (Van den Berg 1997: 90-91).

These years of pasture scarcity as far as the nomads were concerned did not result in any more clashes between nomadic cattle keepers and agriculturalists on the lands that were not in use as project area, such as the territory of Guidiguis, Horlong - a village just south of (and more or less surrounded by) Kolara[162] -, or Gadjia, the adjacent village to the west, that were used as a resort[163]. There were also no real attempts by nomads or cultivators to invade the project areas, although control by official officers would have been difficult. Because the rules were clear (set by project administration together with government and Fulbe authorities and also backed by the project structure and the government) it seems that nobody had the need to question them. Several chiefs - Fulbe cattle owners themselves - in surrounding villages tried to implement the same rules, as these were profitable for local cattle owners.

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[161] According to Van der Ploeg (2001: 52) the number of nomad household heads in the research area is 250 during the rainy season (based on his interviews and information of the veterinary services).

[162] See Figures 5.2 and 5.5.

[163] Between 1977 and 1981, the time of onset of the Mindif-Moulvoudaye project, sixteen (28 %) of the 58 respondents changed campsites to Horlong, Gadjia or Guidiguis and eight (14 %) to other places. Between 1977 and 1990, a total of twenty-five respondents (43%) changed to the three territories mentioned. They did not all come from the grazing blocs of the project and some of them changed their campsite again before the end of the project.

As soon as the project ended, nomads again started to come to the area. They were still aware of the stories of their fathers and grandfathers (or sometimes remembered their own experiences) of the good and undisturbed pastures "in the Mindif bush". They wanted to use their age-old rainy season pastures and camps. At the same time the scouts of the new groups discovered the region, attracted by information that was spreading concerning an area that had remained untouched for over a decade and by their own observations there. The different transhumance groups that roam the Diamaré plains are mostly of Fulbe descent, together with some Choa Arabs and certain herders of other ethnic groups[164]. Most of these Fulbe are categorised as belonging to the "Fulbe nomads" lineage in general (e.g. sub-group Fulbe Woïla, Fulbe Mare, Alidjam or Adanko'en), others are part of different ancestor groups, such as the Fulbe Bagaarmi (sub-group Kesou[165]), the Fulbe Yirlaa'be (sub-group Yillaga) or Fulbe Wolaarbe (sub-group Ba'a)[166].

Agriculturalists also rediscovered the bush. Soon some cultivators from surrounding villages began to clear a small area of fields. These were easily avoidable at first, as large parts of the bush still remained usable for grazing and for cattle tracks, but gradually the numbers of farmers increased, later to be followed by actual settlements.

5.6.2 Environmental domain

Physical basis

The Diamaré bush with its savannah shrubs and trees grows on the badly permeable Planosol-like soils, the clayey-sandy Cambisols and the remaining Vertisols and colluvial soils that have not (yet) been cultivated by human populations. Vegetation differs with the soil composition and can change quickly over a short distance. On the more sandy surfaces, tree vegetation is dominated by several *Acacia* species, *Faidherbia albida* and *Tamarindus indica* (De Steenhuijsen Piters 1995: 42), and *Anogeissus leiocarpus*, *Sclerocarya birrea* and *Guiera senegalensis* (Boutrais 1984: 53). Where clay is more important especially *Acacia seyal* and *Balanites aegyptica* can be found (id). Fotius (2000: 31-32) mentions the presence of *Piliostigma reticulata*, and in the *herbaceae* sphere: *Pennisetum pedicellatum*, *Echinochloa obtusiflora*, and several *Andropogon* and *Chloris* species. The broad diversity offers rich nourishment for livestock.

In principle, this area is fully equipped for grazing and foraging, with its natural abundance of herbs, shrubs and trees. However, because of over-use, the quality of the vegetation is not as good as it should be. Even in the 1970s several extension workers noticed the degradation. For that reason the Mindif-Moulvoudaye Pilot Project was started (see Box 5.2). During the project period, grazing blocs were able to recover but the pressure on other parts of the bush increased. There are places where all perennial grasses are replaced by annual ones which generate fodder of a lower quality. After the end of the Project, a difference in quality could indeed be observed between the former grazing blocs and the rest of the Diamaré. Twenty percent of the respondents explicitly state that they came (back) to the grazing blocs because of the good bush quality[167].

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[164] During the research in the bush we encountered representatives of thirteen different Fulbe sub-groups (some of these again sub-divided according to their own classification) and herders from four other ethnic groups.

[165] According to Seignobos (2000c) the Kesou Fulbe have more or less taken over Arab customs.

[166] For an extended genealogical tree of the Fulbe groups in North Cameroon, see Seignobos (2000c).

[167] See also Ligthart (1993) about the perception of over-grazing in the Diamaré.

With regard to the hydrology of the area, people declare that it is less secure than in the past. The unpredictability of rains is increasing (or so people say)[168]. Since the 1970 and 1980 droughts, old rainfall patterns have not been restored. The year total of precipitation has not reached the 1960s levels and nomads have to stay further south than they used to (Zborowski 1996). Also the length of the rainy season is less predictable[169]. This means that the herds cannot arrive in the Diamaré the moment their herders would like (and have planned), because no re-growth has yet taken place. In 2001, for example, after an early start of the rains in April, they stopped again up until the second half of July. The nomads who came from the Yaéré, where the dry season pastures were exhausted, got stuck on their way. Failing rainfall causes a decrease in bush vegetation and the quality thereof. According to Gaston (1996) the protein content and the digestibility of the fodder particularly decreases. Indeed, ten percent of respondents point out that the amount of grass and the quality thereof is far lower than is necessary, both inside and outside the former grazing blocs[170].

Another problem of the diminishing rains, mentioned by the herders, is the speed with which water for drinking purposes for humans and livestock runs out. In the course of the dry season, they have to leave the area earlier because of a lack of drenching water, although the number of water holes is higher than before the project activities started[171]. In the rainy season of 2001 (July – October) thirty-three percent of respondents indicated a lack of water points for their cattle.

Trying to maintain or increase the quality of cattle food by investing in the quality of the bush and the production or purchase of fodder is something the nomads never considered. Their way of life was to move with the rains. Nowadays, several young men talk about range cattle keeping. They have heard of the methods of "the white" and of their kinsmen in the North Province and Adamawa, who fence in their pastures and treat them with fertilisers or sow grass seeds. The fences are used to ensure that no more TLU are allowed than the carrying capacity of the land.

Density of cattle and people

Indeed, the number of cattle seems to constitute a problem in the region. Part of the cause is the southern drift of nomads because of the generally low precipitation. Another reason for the increase in cattle density in the southern Diamaré is the increase of rich town people who invest in herds and send them into the bush with a paid herder[172]. Present nomads complain about an increase in number of cattle in comparison to the past. On the one hand they also refer to the new herds of town or village-based owners while, on the other hand, they explain that the numbers of cattle per person are increasing as well. Table 5.6.1 shows the percentages of respondents with a certain interpretation of the origin of increase (or decrease) of cattle numbers in the bush.

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168 See also Njomaha (2004).

169 See chapter 4.

170 But it applies more outside since the former grazing blocs are still preferred as pasture.

171 One of the goals of the project was the construction of water-wells and artificial lakes, to cover the whole area. Part of this plan has indeed been implemented.

172 Personal communication by the Provincial Head of the Veterinary Service in Maroua, January 2003. See also Van den Berg (1997: 90-91).

Table 5.6.1 *Percentage of respondents (n = 58) that thinks the change of cattle numbers in the bush is due to certain categories of owners.*

	Cattle increase					Cattle decrease		
	Cattle in general	Cattle of town based owners	Cattle of village inhabitants	Cattle of respondents	Cattle of nomads in general	Cattle in general	Cattle of respondents	Cattle of other owners
% of respondents	60	64	24	17	52	22	10	0

The same cattle increase is perhaps causing the increase in the number and size of *hardés* that is mentioned by ten percent of the nomadic respondents.

The increase in cattle number owned by nomads is partly due to an increase in the number of nomads themselves. Forty percent of the respondents agree with the idea that the total number of nomads is rising. The increase in numbers of cattle nomads is made up of members of ethnic groups and clans that have already visited the region for ages as well as of members of ethnic groups that are new to the area. For example, 17 % of respondents referred to an increase in the number of nomads from Nigeria[173] during the last few years[174].

Land availability

The increase in cattle herders and their herds leads to a reduction in the amount of surface available per user. Until recently, the bush was regarded as enormous and 'never ending'. Nowadays, only five percent of respondents state that one has to move in the event of problems: "The bush is big enough". It has to be said that the percentages of respondents with an interpretation of declining bush availability differs according to the approach taken when discussing the (probability of) decline[175]. Also the percentages that give a certain reason for the decline differ. Table 5.6.2 gives a sort of aggregate percentage per category of causes.

Table 5.6.2 *Percentage of respondents with a certain idea about the reason of bush surface decline*

	Too much cattle	Too much new settlements	Too much fields in general	Fields on camp sites	Fields too dispersed	Too much cultivators
% of respondents	24	12	28	22	5	36

[173] The Awalme and the Sou-en groups (Source: interviews in Diamaré bush, July-November 2001).

[174] Also the numbers of Shoa Arabs in the Diamaré are increasing. They form the majority in the uppermost part of the province, where they have settled to cultivate and to fish. However, more and more cattle keepers among them come to the south during the rainy season.

[175] For example, discussing the opportunities of children results in other percentages that consider the bush as not being limitless as regards time: in a general talk about the problems of life as a nomad, three quarters of the respondents explain that the bush is already too small these days, but only 64 % think that their children will be confronted with the limits of the bush. In addition to this, 32 % think there will never be a bush shortage for their own herd and 24 % are of the same opinion for all herds in general.

Of all the respondents, 22 percent have already encountered crop damage problems with cultivators. 42 % indicated that they have changed the site of their rainy season camp because of fields or settlements on the spot or too nearby, as a result of which damage could occur too easily.

The quantity of land for grazing is diminishing in the whole of the Far North Province because, due to general population growth, more land is being used for compounds and settlements and more and more cultivators are using former grazing lands for fields. The Diamaré south-east of Maroua is a kind of last resort for cattle grazing during the dry season. Thus, as has been already mentioned, even if the number of cattle per person had stayed the same (which is not the case), the amount of land per cattle keeper and per cattle in the Diamaré would have declined.

The amount of grazing land for a certain person or group can be maintained by safeguarding the access to (and use of) land. Theoretically this can be done through the creation of ranges (as in the Adamawa region) or by making agreements with authorities and/or other users about the delimitation of pasture areas and trekking routes to and from those areas and to and from water points.

Some village cattle keepers have taken State law as a departure and 'developed' a certain piece of land because this enables them to obtain 'ownership rights'[176] (see below: land allocation rules). This development is very moderate: a simple delineation, cutting of some trees, administering of a bit of fertiliser and (more interestingly for their cattle) the start of the digging of a water well.

It is also possible to search for more secure territory in other places. This means the VoE diagram would re-start at box 2, but in another area. In a way this is indeed what happens: several owners send (part of) their herd to the south, where more grazing space seems to be present, now that tsetse flies have been eradicated or are at least being kept in check (by opening up the bushy habitats of these flies for agriculture and using more and more chemical antiparasitics[177]). Another possible destination is the grass fields of Chad in the east, now that the civil war there has ended and security has increased. On the other hand, a southward move of herds has also been taking place in Chad since the early 1970s together with the absence of proper rainfall recovery. As a result, also there cattle density in the useable areas is increasing (De Bruijn and Van Dijk, pers. comm. 2003).

Calorific needs and availability

Table 6.4.1 (see below) shows the number of cattle per respondent. This provides a basis for the calculation of available calories versus what is needed. According to Dietz *et al* (2001: 198) to subsist on milk and meat of a herd 3 TLU (= four zebu) is needed per capita. In the Diamaré the mean nomadic household of 2.1 adults and 4.7 children needs slightly more than 27 cattle. Because the average number of cattle per herder is 118, this means that, on average, the calorific needs of a household can be met by the herds.

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[176] This was a tactic used by several Fulbe cattle owners, especially in Gadjia, in the Daram territory which is adjacent to the study area.

[177] See Boutrais (1999).

However, there is a difference in the situations of owners, herders who herd for their fathers (or wider family) and those that herd more commercially. Off-take to meet calorific needs is normal for the first two categories. The third category has to explain all losses to their bosses. The normal yearly off-take to maintain the herd (older animals etc) cannot automatically be used by the herder. Everything depends on the conditions of his contract. Thus, it is difficult to say anything about the calorific supply of the last group in relation to meat consumption. On the other hand, all of the herders herd more than three times the number of animals they need in calorific terms (most even herd in excess of ten times more). This number of cattle provides enough calories even when only the milk is used[178].

5.6.3 Human domain

Health

Access to hospital facilities is difficult for people deep in the bush, like the cattle nomads. On the other hand, these people are used to travelling and covering large distances in a short time. If they have cattle, they also have (access to) money to pay bills. However, most of them are not used to these modern facilities. They prefer the possibilities that the bush offers with regard to traditional medicine: they know what they need, they know where to find the different ingredients and they know how to administer them (both for themselves and for their cattle).

The general health situation (amount of illnesses and precocious deaths, for example) is no different than for other groups of the population in the Far North. The mean age of respondents, as well as the upper range thereof is approximately the same as for the Fulbe and Tupuri of the Diamaré villages[179]. Also the number of surviving children per household is approximately the same as for the village-based Fulbe[180].

The only problem the bush nomads encounter is access to drinking water. During their stay in the Diamaré they depend on the rivers and pools that develop because of the precipitation. In the Yaéré, during the dry season, the situation is more difficult: no running rivers and no closed wells, although some wells have been constructed there for the cattle keepers. This lack of hygienic water constitutes a threat to the health of the nomads.

Education

In general, the nomadic cattle keepers had not attended school. Neither the respondents themselves, nor their sons, daughters nor wives have had any formal education. Some of them have been schooled in the Koran and try to make their children acquire the same proficiency. However, when young boys have to look after the herd all day, it is difficult for them to acquire an education. Even Koran schooling is less than that of sedentarised Fulbe.

Household heads try to enhance formal education levels of sons or 'selfs' to make it at least possible to bargain with higher level authorities about their interests. They also hope to become more familiar with access routes to necessary information. Young men perceive their lack of formal education as a setback compared to other Cameroonian citizens. They dis-

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[178] Even those respondents who do not own cattle, but herd for family members have enough cattle at their disposal to live from the milk.

[179] The mean age of the nomad respondents is 46 years; the range is 19 -75.

[180] In both cases, the household size is 6.8 (own observation June-July 2001). See also Van der Ploeg (2001: 71) about household size.

cover that they have no access to higher positions which are occupied by the sons of agriculturalists. Moreover, young men try to keep up with 'modern' life, contacting other young men and asking for information wherever they can. However, the time spent on improving knowledge about 'modern life' is taken from time spent to learn typical cattle keeping capacities. Because of their situation between two cultures, they do not reach the level of professionalism of days gone by, nor do they learn enough to make a profound impact on the other world.

Some nomads try to send (some of) their children to school. This is usually only a successful approach if they have relatives settled in the neighbourhood of a school where those children can be housed. For 'local cattle keepers' and city based owners, all sorts of investments and especially that of schooling are far easier than for those that 'roam the wild lands'.

5.6.4 Economic domain

Farm animals

Although in the Diamaré bush some nomad-groups can be found who are specialised in sheep herding[181], they are rare and, as a result, all the respondents in this study (n = 58) are cattle herders. Twenty-eight of them (48 %) are not owners, but guard somebody else's cattle[182]. Those that herd on a commercial basis (not for family) gain a calf every 5 months. In the meantime they use the milk produced by the cows. Most of the time necessities, such as cereals or cloths, or saltlicks and medicines for the animals, are paid for by the owner.

Table 5.6.3 Ruminant numbers per respondent (n = 58)

		Cattle				Goats			Sheep		
		Numbers		Herds		Numbers			Numbers		
Place of keeping in rainy season		Mean / respondent	Range over resp.	Mean no / resp.	Range over resp.	Mean per resp.	Range over resp.	No of keepers	Mean / resp.	Range	No of keepers
Diamaré		118	5 - 500[c]	3.6	1 - 6	5.7	1 - 66	20	16	2 - 60	40
Other places	Chad[a]	42	3 - 100	1	0 - 2	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.
	Cameroon[b]	50	8 - 100	1	0 - 2						

[a] = n = 3

[b] = none of these respondents (n = 6) has cattle further south

[c] = three respondents have less than 10 cattle to herd (two times owners, one time just a herder); 12 respondents have more than 200 cattle (nine times owners and three times herders)

The numbers of cattle owned and the sizes of herds in the care of herders or owners can differ enormously. Most of the time small ruminants are also kept. See Table 5.6.3 for an insight into animal numbers.

[181] For example, certain Arab Choa groups; Fulbe Uudaa'en and Fulbe Baali (*baali* means sheep in Fulfulde).

[182] Forty-two percent of non-owners herd the cattle of family (mostly fathers); fourteen percent that of Kolara villagers and forty-four percent of town-based owners.

As more than 60 % of respondents explain, prices of cattle, meat and milk are very unstable. Prices change throughout the year in line with the ebb and flow of the abundant and meagre seasons. In addition these prices change over the years as the macro situation (partly defined by climatic parameters) determines the *de facto* supply in cities and towns and thus demands in specific areas of the country. According to Van den Berg (1997: 82-83) the rich village-based cattle keepers use the money from the sale of cattle at a profitable moment to increase their agricultural production, after which they can increase their herd size again[183]. For nomadic cattle keepers, such selling and repurchasing of cattle to invest in agriculture in the meantime is not an option. In general they do not want to sell, but they have to in order to buy necessities such as cereals[184]. Some of them try to speculate a bit with their cattle (see Table 5.6.4), although mostly out of need due, for example, to illness in the family. If possible, they buy back later: "You have to buy when you have sold, and if you have money".

Table 5.6.4 *Percentage of respondents that sold or bought cattle in 2000 and 2001 and the number thereof per person that bought or sold.*

	Cattle sold			Cattle bought			% of respondents that bought and sold in the same year
	% of respondents	Mean cattle sold per 'seller'	Range of cattle sold / 'seller'	% of respondents that bought	Mean cattle bought / 'buyer'	Range of cattle bought / 'buyer'	
2000	86	5.9	1 - 20	31	1.7	1 - 5	29
2001	93	6.2	1 - 20	39	4.5	1 - 10	38

As the Table shows, almost all the people who bought cattle had first sold cattle in the same year. Normally cattle herds increase thanks to the arrival of new-born calves.

For all cattle keepers the biggest risk to their jobs is the loss of cattle. This can be due to diseases or accidents. Even the police can pose a threat, because they can confiscate cattle if owners are accused of a criminal act or of damaging fields. One of the other problems experienced during the last couple of years is the increase in cattle theft. Most of the time this occurs during the dry season in the Yaéré, but it influences the total strategies of cattle keepers. In answer to those thefts, herders have to operate in larger groups (see 'social domain') and even have to carry weapons. "Without them you are too vulnerable", they say.

The cattle keepers complain about the difficulty of maintaining the health of their animals. In June and July 2001, all the herders referred to the poor health status of their herds. "Don't you see how thin they are?" This is partly a temporary phenomenon which occurs each year at the end of the dry season and which was aggravated in 2001 by the prolonged drought period. But it is partly due to the improper veterinary situation, they say. A better health status would help to enhance the efficiency co-efficient of the herd and thus decrease the pressure on the grazing lands. However, the herders do not see any possibilities for achieving this.

[183] With that the difference between rich and poor village inhabitants increases.
[184] Moritz (2003) stated that commoditisation of cattle by Fulbe cattle-keepers is a century old phenomenon.

Veterinary services and medicines are expensive and not easily accessible[185]. People complain that vaccination prices are too high. And, as mentioned before, vaccination is used as a way of taxing the owners because they have to pay per head of cattle[186].

In addition, herders say they also have to pay for the right to use the pastures. At least half of the respondents paid 10,000 Fcfa per herd to the community in whose territory they arrived (mostly Moulvoudaye). Some pay to the *lamido* of Mindif or the *lawan* of the region (mostly Kolara). Some people even pay several times, for example every time they pass the boundary of a sub-district. There are differences in the price to be paid per herder, per region and sometimes per receiving person[187]. Only three of the respondents have (once) refused to pay, and for one of them that resulted in imprisonment. Sixteen percent even explain that it is impossible not to pay, although they can only imagine the repercussions[188]. On the whole, the herders have no clear idea about the financial obligations.

Table 5.6.5 *Cattle loss in 2000 and 2001: reasons and numbers* (n cattle = 6856; n respondents = 58)

	Diseases				Thiefs			Other reasons	
	Respondents with ill cattle	Cattle ill	Resp. with dead cattle	Cattle dead	Range dead cattl / resp.	Respondents struck	Cattle stolen	Resp. involved	Cattle involved
Numbers	28	245[a]	22	211	0 - 85[b]	7	16	6	12[c]

[a] = different diseases are mentioned; often (also) milk-production is decreased
[b] = one owner lost 85 cattle; the rest lost a maximum of 10 cattle
[c] = five cattle of one owner were taken by the police; seven cattle of five owners/herders died after, for example, they fell into a hole.

Non-agricultural

Non-pastoral types of jobs or income are hard to imagine for the nomadic cattle keepers. The cattle are their life and their whole culture is based on the cycle of the trekking to and from dry season grazing lands and the production of calves and milk. There may be rich '*el Hadji's'* (Muslims who made the holy pilgrimage to Mecca), who are also big traders, but the merchandise is, again, cattle.

For the rich town-based cattle owners cattle are an economic investment. They earn their money with other activities, such as big trade or high governmental positions. They do not guard their herds themselves, but always hire young men with some experience with cattle to herd them in the bush.

[185] Too far away and if you arrive at a post more often than not the personnel is not there, they say.
[186] It would help if tax per head of cattle was abolished to make more people immunize all their cattle without fear of a high tax bill.
[187] Some respondents say they did not pay because the *lawan* of Kolara said it was not necessary, while others mention their payment to the same *lawan* in addition to another amount of money in the Yaéré. It was not possible to sort out whether they mixed up (state-based) tax payments with the different payments which existed in the past that together made up a kind of 'protection fees' (see Moritz *et al* 2002). In the past, each camp site had to pay for 'over-night permission' (mostly to the regional *lawan* or *lamido* as the 'owner of the land'). In addition, the zakat, the Islamic tax to help the poor, had to be paid, mostly to the *lawan*.
[188] They do not know others who refused and therefore have no experience with what will happen.

The settled Fulbe (in the villages) with a large herd have a kind of in-between position, because they not only want the cattle for economic purposes (as a banking system), but also for sentimental reasons. To them cattle are a status symbol and part of their culture as well. For both town-based as well as village-based owners, the cattle are not their lives. They send herders on transhumance with them when necessary, but stay at home themselves. When the herds have to resort to (dry season) areas further away, the owners visit such locations to check the herd and the herders, but even then they still only spend a minimum amount of time in the bush. Of course it is convenient to have the cattle as close by as possible. For them the question is, therefore, is another banking system possible or is an (other) nearby and secure grazing area possible. The answer to the last question is 'no'. Apart from several small bush patches spread throughout the region, the bush area in the Mindif-Moulvoudaye-Guidiguis triangle is one of the last big savannah forests left in Cameroon, where herds can roam around without disturbing too many agricultural fields.

5.6.5 Social domain

For both the improvement of pasture quality and quantity as well as for the economic position of the herd, social linkages have to be built. Only when a group is strong enough can it persuade important government agencies or influence the market. However, at such moments, the differences between the different individuals may cause problems. For example, decisions about which path of actions to follow meet with discords between the generations. It turns out to be impossible to develop one straightforward strategy. At that point the social fabric breaks down. As a result, different investments are in conflict with each other.

Family and friends

Normally in the nomadic cattle keepers' tradition, sons remain within the social group of their fathers, including after marriage, and herds are kept together as long as the number of cattle allows shared grazing. Mostly, these sons guard the whole herd. If the father has more than one group of cattle, more sons or (if these are not available) nephews or even paid herders have to be charged with the job. The decreasing reliability of pastures means herds have to be divided more quickly[189] and then sons move away from their fathers at an earlier age. As a result, distances between the generations grow. In the Yaéré and on the road from there to the Diamaré, herds are clustered to increase security against bandits and ad hoc thieves. On the other hand, later on in the dry season, herds have to be divided to find enough fodder for the animals.

Although nomads are thought to spend all their time in the bush, in reality the household heads (family fathers of a quite extended family of wives, children, and married sons and their wives and children) spend their days at meeting places in villages and markets to keep up the ties with other nomads of the same group. At the same time they keep informed about rainfall patterns in the rest of the Province, growth and quality of grasses elsewhere, prevalent cattle diseases, cattle prices, new rules and threats and rumours related to their communities. Here they can maintain their social networks. While sons and grandsons look after the herd, the family heads travel around and weave together the social fabric. Interviews in the bush had to be done before they left to go to local centres not because, as they said, they had to buy some-

[189] See also Gaston (1996).

thing there (although they often did buy salt[190], tea or sugar) but because they had to meet somebody or anybody.

Political

Although the family heads spend all their time building and maintaining the social capital, most nomadic cattle keepers do not dispose of strong ties with important higher level politicians or civil servants. As a group they are not represented within the important institutions that have a say in the management of the bush. It is worse than it used to be. The increase of bush encroachment by cultivators is connected to a decrease in their support for local authorities. Apart from the decline in the legitimacy of Fulbe authorities versus agricultural groups, the number of Fulbe authorities is now generally declining. Social linkages with higher level authorities are diminishing now that several of these civil servants' positions have changed from Fulbe (thus cattle-minded people) to *Kirdi* persons. These two facts are having a negative effect on the security of access and use of pasture areas.

Land allocation

According to the nomads the bush belongs to nobody[191] and is free to use. They cannot stop newcomers from roaming freely with their cattle. 83 % of respondents declare that all herders are equal and that there are no rules governing use of the bush by cattle keepers. The only unofficial rule is that you should herd your cattle in a way that they do not mix with those of others. Two or three individuals refer to some owners or a special ethnic group that invented the rule that it was not allowed to pass right along the edge of the camp[192].

Table 5.6.6 Percentage of respondents that indicate a certain type of authority that has the power to decide about bush-use or water-use.

		Village Lawan	'Higher' authority	Own chiefs	Nomads in general	Others	Nobody	No idea
% of respondents	About bush-use	31	17	26	5	2	2	16
	About water-use	31[a]	0	2	3	12[b]	17[c]	35

[a] = half of these refer to artificial water points
[b] = mostly the 'Project' or the 'whites' are mentioned
[c] = most of the time this refers to rain water pools and rivers

On the other hand, when asked about persons who have the authority to decide about the use of the bush, 76 % of respondents referred to a specific person or authority[193]. There is no connection between the ethnic group and the person indicated, nor between the person indicated and the institute or person that is mentioned as the one to whom they have to pay for the use

[190] The Mindif-Moulvoudaye bush area does not have a natural saltlick, so the cattle-keepers supply their herds with salt they have bought.
[191] Except for two respondents (3 %) who think that "the *lawan*" is the owner.
[192] In one case, several years ago, this was heavily contested by the other nomads. The violence only stopped through the intervention of the authorities. A year later, herders were camped at other places.
[193] Other options mentioned for decision power are: nobody, everybody, the own group or an older brother. Sixteen percent of respondents just do not understand the question.

of the pasture. Only the 'own chiefs' that are mentioned are not referred to by members of other groups[194]. Sometimes the authority of the 'own' chief depends on the place: another campsite and the area around it is managed by another chief. Table 5.6.6 gives the percentage of respondents that indicate a certain type of authority that has the power to decide about the use of the bush. Because the right to decide about water use can also be connected with land allocation, the table also includes information about the ideas of respondents as to who is able to take decisions on the use of water.

Although thirty-three percent of the respondents indicate somebody who has decision power over water-use, 84 % mention the absence of rules (*sic!*). The only rules that are discussed[195] are those based on friendliness and mutual use: you should take care that others can reach and use the water points like yourself.

5.6.6 Discords and claims

In general, the discords are more recognisable than the claims. An increasing number of cattle keepers have had problems with cultivators in the bush due to damage caused by cattle. Although fewer than half of the respondents were actually involved in crop damage during the years 2000 and 2001, almost everybody expressed his concern about the increase of these incidents. The same counts for the occupation of camp sites. Almost the whole nomadic population (90%) has encountered that problem. It has to be said, though, that half of the time the occupation was performed by other (new) cattle keepers. But then, it was mostly solved peacefully: "It is shameful to fight with other nomads or to chase them away."[196] From time to time the encounters between cultivators and nomads result in quarrels and rows and sometimes even the gendarmes have to intervene.

Claiming the area is an important sub-strategy within the strategy of holding onto a certain area for grazing. For the nomadic cattle keepers in the Diamaré it is mostly an opportunistic, ad hoc strategy, a reaction to individual invaders. Next to that, claiming is an expression of age-old rights that, until now, nobody has questioned. Within the claim, users refer to rules and laws, namely their own rules and laws, although even those are not clear and are at least changeable, as we have seen[197]. Nevertheless, the Cameroonian legal system recognises the rights of communities to manage their land according to customary law[198]. For a lot of the cattle keepers this means that the local chief, for example the *lawan* of Kolara is the 'master of the land'[199] when the bush falls within his territory and he decides what should be done with it.

In practice, the cattle keepers of the Diamaré bush claim two different things. First, they assert a general, communal right as a (diffuse) group to the whole bush. As has been stated above, they say that everybody has the right to come to the bush and uses it as a pasture for his herds. They sometimes refer to the period and rules of the Pilot Project to stress their claim

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[194] For example, village *lawans* are mentioned by members of a diversity of all interviewed groups, except Adanko-en; 'own chiefs' are not mentioned by Yillaga, Houdda, Alidjam or Adanko-en.

[195] Only 7 % of respondents mention these rules spontaneously. Then, from time to time, others agree, but with an air of "this is so normal and obvious, why bother to mention it".

[196] This or a variation on this remark was heard more than ten times.

[197] The different groups of cattle keepers also have different rules and customs according to their ethnicity.

[198] See chapter 4.

[199] As he is called by 22 % of respondents.

that the bush is grazing land. Surprisingly, the fact that the nomads were excluded during that period does not seem to make them refrain from this argument. It is the continuity of the area as grazing land that they want to stress. They cannot afford to exclude the project period from their overview of 'pastoral use for ages'. All former generations of nomadic pastoralists used this bush, they are using it now and their children will use it in the future. Even those whose family came here for the first time only a couple of years ago, refer to the general nomadic inheritance.

The second claim is that about their camp sites. The nomadic cattle keepers plead for a kind of ownership of camp sites. Here the same type of rules are applied that can be found in the ownership rules over agricultural land, namely that he who uses first ('develops') becomes the owner.

Both claims are fiercely expressed to outsiders. Researcher, interpreters, extension workers, politicians … whoever talks with the nomads is told the story over and over again. "My fathers' father already used this bush, this spot. He paid the *lamido* of Mindif to have access and protection here. This is specially meant to be pasture, especially for cattle …It is OUR bush."

The claim about camp sites is made against cultivators who are found at the spot. Sometimes the claim is made beforehand. The nomads know that (nowadays) they risk coming home from the Yaéré to find their places occupied. Therefore some of them tell the *lawan* that a certain campsite is theirs and ask him (whether or not underlined with money) to protect that area against intruders. Some others protect their possession with magic by putting a spell on the spot that would deter newcomers.

When the cattle keepers find cultivators at their camp sites, they complain to the *lawan* or another authority. Like the Tupuri they choose the person who they are pretty sure will back them. The start of the Badadji neighbourhood between Daram and Kobo is a good example of the opportunistic choice of authorities to be involved[200]. After the Tupuri settlers had asked for permission from the *lawan* of Kobo, who was certainly sympathetic (and indeed gave his permission), the nomads complained to the *lawan* of Daram, who was against the settlement and stated that it was on his territory. Both *lawans* involved a higher authority: Kobo asked the sub-prefect of Moulvoudaye, and Daram asked the *lamido* of Mindif. Their opinion was clear beforehand. When all the parties had finally descended to the spot to investigate boundaries and the original campsite, etc., the cultivators were already firmly settled and the sub-prefect, being the highest authority, decided they could stay: a "*fait accompli*"[201].

Nevertheless, the nomadic pastoralists of the Diamaré region do not express their claim openly and publicly. They have not (as yet) organised a 'pressure' group to stress their claim at a higher level. This they leave, as is their custom, to their representatives and the ones they consider to be their (and the bush's) chiefs, like the *lawan* of Kolara. Most probably he is a good representative because he has his own interests in keeping the bush, namely because he has a lot of cattle and he earns from the incoming nomads. He can be regularly found at the administration office in Moulvoudaye, where he tries to safeguard the interests of cattle keep-

[200] Based on own interviews and information from Van der Ploeg (2001).

[201] In fact he first said that the cultivators had to leave after the harvest. He explained that the Cameroonian government ("Biya", he said) did not allow the chasing of people from their fields after they had already sown. A year later, however, he did not do anything (in time) to chase away the cultivators before they had sown. So he gave them *de facto* permission to stay. The nomads were even more frustrated because they had trusted the decision he took in the first year.

ers of the Diamaré bush and, more specifically, those of his own territory. He uses the same arguments as they do to claim the bush as a pasture zone, but he adds strategic arguments that are related to the broader, even national, economy.

In short, both cultivators and (some of the) cattle keepers perceive the area as theirs and come to assert rights to the area. These assertions can easily clash.

5.7 Violence: Box 4

Only when (one of) the parties use forceful contending do actors arrive in the last box of the VoE diagram: Box 4, Violence (see Figure 5.1). The influence of third parties therein can be substantial. It is not yet possible to conclude that local elites or richer cattle keepers try to mobilise the 'common' users to stand up for their rights and thus trigger revolts and violence. It seems as if they only trigger the controversy with their indecisiveness and corruption (and because they win by it). Each party can choose the authorities that back them to stress their point. This widens existing divisions. On the other hand it is a risky undertaking because a year later the opinion of that authority may have changed (whether or not influenced by 'gifts').

5.7.1 The use of force

Contending: the use of threats

Contending means trying to get your own wishes implemented without any regard to the wishes and needs of others. For the Tupuri cultivators this means that they want the cattle keepers to continue using the bush only in those areas where they cannot disturb the settlements and fields of the cultivators[202]. They are not bothered by how these cattle keepers earn their living, where they have to herd their animals or where they have to live during the rainy season. As far as the nomadic cattle keepers are concerned, contending would mean that Tupuri stop settling and cultivating in the Diamaré bush. In theory both can be achieved by persuasion, threats or straightforward violence, that is by beating or shooting to get rid of the others.

The route to violence starts with threats. These are frequently used to avoid violence, but then only when the other party does not know the hidden agenda of the one that poses a threat: that he is not going to use violence. In general, threats that are repeated but never brought into action become meaningless. To give a threat more weight, from time to time you have to show your strength and make the other feel his vulnerability. Unfortunately, a person or a group that experiences his weakness is inclined to invest in gaining strength and even in striking first because that is reported as generating an advantage.

A cattle keeper who threatens to attack a new settlement has to be sure that he appears to have enough allies and that it is likely that the government cannot and will not interfere. Persuading the authorities goes hand in hand with such threats. In a broader sense, as well, the cattle keeper has to do some 'homework' before he threatens. Image building and spreading rumours of strength are part of the game. For the Choa Arab nomads, for example, the homework consisted of yearlong image building. Now everybody in the region is convinced that

[202] Agriculturalists are happy to see cattle in the bush because they spread dung. However, if there are too many cattle, they cannot avoid the fields, cause damage to the crops and may lead to disputes with cattle-owners.

they are the strongest and most powerful cattle keepers in the bush. People think that this can partly be traced back to magic capacities.

During the field work I did not encounter anybody who actually had or was threatened with physical attacks to or by the other party. The only direct threats I came across were what can be called "counter-threats". These are the kind of threats expressed as a "If they…, then I…" Mostly these remarks were uttered by cultivators while fully engaged in the clearing of a bush parcel and (thus) during the time the pastoralists were far away. But on the other hand, these threats were accompanied by strategic details like: "I have already asked the five household heads on this side of the bush whether they would help me in case of…" and, "We can reach each other easily by yelling or with the big drum next to the *djaoro*'s house and when we are needed, we will come instantly with our machetes and spears to help our neighbours."

The pastoralists also uttered threats against cultivators and settlers to the researcher in their absence. Indeed, only four nomad respondents (7 %) made threatening remarks regarding their adversaries' person. "When I find those farmers on my camp site, we will put a spell against them[203]" and "Then we will kill them or wage war against them".

Other types of threats occurred regularly, and these were also often personally expressed to the adversary. These were aimed at property or territory of the other party. "If I see those cattle again in my field I will get hold of them and eat them." Or, "Then I will follow the herder and at night I will return, take his best cattle and bring them to my place." Most of the settlers who had some cattle damage in their fields (20 %) made similar statements – and not only to me, as became clear in the encounters with the pastoralists. The cattle keepers reminded me again and again of this aggressive stance of the cultivators[204].

The pastoralists' threats focused mostly on chasing away new settlers once they had discovered that these had founded their hamlets on rainy season camp sites. Especially those that had already moved several times - because of the project, new fields or new villages - (34 % of respondents) expressed their annoyance at the new settlements.

In addition to the chasing threat, they spoke of letting cattle into fields, but mostly this was not so much a threat as a warning. The difference is that the second one is an expression of concern: "We are willing to avoid the fields, but if there are too many we can't. We explain beforehand that, while trekking with our cattle from one grazing area to another, we have to pass through the fields." A warning belongs to the persuasion stage, but is less aggressive than the threat. It therefore keeps the option of mutual problem solving wider open, and it does not raise (or scarcely raises) the risk of counter-threats and (pre-emptive) attacks. In contacts with the authorities it can help to underline your positive intentions and in the event of lawsuits about crop damage it can help to minimise the penalty (reimbursement) to be paid.

Threats which refer to support from authorities is also a frequently used strategy. "If you put up your houses here, I will call the police and they will imprison you." Of course this is only possible when the other party knows (or thinks) that the police are really on the side of the 'enemy'. Threatening the authorities is also possible. In case of a conflict over new settlements, wherein the authorities are not yet clear about what to do, it will help when the set-

[203] They talk about "a gri-gri" in general or "the elephants", what means that they will change themselves into these giants and destroy the farmers' fields (see also Van der Ploeg (2001).

[204] Because most cultivators explained that there were no signs of former cattle camps or cattle in the vicinity of their new settlements, they could not and did not express threats to cattle owners that disturbed them in their new hamlets.

tlers express their decision to stay and "only go away dead." This can make the authorities refrain from actions to chase the cultivators away, because then they are responsible for casualties.

Contending: the use of violence

The use of violence can fall into the category of threat. Then it is short-term, non-responsive violence. Indiscriminate cattle raids by cultivators to show that "this is not a sound place to herd your animals"[205] or the beating up of a lonely agriculturalist by young pastoralists to show the reverse are clear examples. Unfortunately, these actions can be the start of more violence: revenge, counter revenge etc. Although over the last few years, violent encounters have occurred in the Diamaré plain between some young pastoralists and new settlers[206], most of these are certainly more of an age old tradition connected to initiation rites of the pastoralists than related to the increase of bush encroachment[207].

The most extreme of the contending strategies is the use of offensive violence. Yet, using this type of force (violence) also needs strategic action before hand. Now it is not enough to suggest that all different aspects mentioned in a threat are at hand. If violence is to be used, these things actually have to be at hand. Weapons, allies and a thorough knowledge of the enemy's position and strength, as well as a willingness to either win or give in, are indispensable. Making sure government troops are either on your side, not willing to interfere, or so far away that you have already gone by the time the police show up, is also necessary. Deciding on all this depends on social networks, information and personal insight and calculation capabilities. In principle, weapons have to be purchased, so money is also needed. However, in practice simple weapons, such as knifes and spears, are always available. Even the construction of simple guns is an easy task (as we can see from the poachers in the nature parks: see Bauer 2003).

The threats already point towards possible moments of aggression. For agriculturalists the moment at which to resort to violence can be an ongoing intrusion of herds into their fields and the risk of yield loss without compensation. The costs and benefits of an attack are weighed up again within a very short time span. One issue that is examined is whether all the preparatory actions, as described above, have been properly implemented. The history of former yield losses caused by cattle and the reactions of cattle owners or authorities (and implementation of official decisions regarding reimbursements) play an important role[208]. The numbers of the other parties at the spot and the chance of escalation (that is: how quickly can their reinforcements be there, how many people from how far away will feel involved) are estimated, as well as the pres-

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[205] This can also be related to cultural habits of 'stealing cattle from the Fulbe enemies'. In Tupuri society, this kind of practice is still talked about as a heroic deed, although less openly in the case of current thefts.

[206] In 1998, a small band of pastoralists rode with their horses into the village of Badadji and tried to get hold of "stolen donkeys". The settlers defended themselves fiercely. This resulted in some casualties. Asked about why they resisted the violence, the pioneers explained that on the one hand it was an instinctive reaction of defending their property and, on the other hand, "if you let those youngsters get away just like that, it would invite them to more such actions" (see also Van der Ploeg 2001: 114 -115).

[207] Several of the elder pastoralist household heads ("*pères de famille*") as well as one of their chiefs explained in detail the 'macho' habits of and mutual provocations between their sons.

[208] Both cultivators and pastoralists point out the differences between the different *lawans*. Some (like the *lawan* of Kolara) have a heart for cattle keepers and will try to solve problems while keeping an eye on the interests of nomads. Others, like the *lawan* of Kobo, favour the cultivators.

ence of allies, etc. Another factor is the position of a threshold for the use of violence[209]. The age-old controversies between Tupuri and Fulbe could be expected to have engendered a low violence threshold when dealing with the Fulbe. However, I did not notice a difference in the ways the Fulbe or the other nomadic cattle keepers were met. Fear for one's family or possessions can also trigger the use of force. For example, one pastoralist reported being shot at by a cultivator the moment he arrived at his former camp site that happened to be occupied by this farmer[210].

For pastoralists the turning point is perhaps reached when they again find their rainy season camp sites occupied, their paths to the pastures blocked and cultivators forcing them to pay reimbursements to crop damage. Some are already in the Yaeré (that is even before they start their seasonal trek to the Diamaré) so hyped up that they are thinking only about those camp sites and those settlers. On the other hand, within the pastoralist community, older family or group leaders are still the ones that decide on family strategies. This may lead to a diminution of outright violence. More straightforward aggression will flare up when made promises are not met. For example, when authorities suggest that they protect the bush but fail to do so. When pastoralists' expectations are broken too frequently, they will start to rely on their own force, with the idea that they are implementing governmental wishes.

5.7.2 Escapes: can violence be avoided?

Contending: the use of persuasion

Persuasion can be done directly. That means that one of the parties explains his standpoint to the other and makes it understood, at least to a level that the other party gives in to the arguments. In this case both parties do not seem to be open enough for persuasion. On the contrary, no party is trying to persuade his adversary.

Next to the direct way, persuasion can also take an indirect form such as persuading enough authorities (and to a sufficient level) so that responsibility for handling the conflict becomes theirs. For example, if the Tupuri settlers were to succeed in convincing the formal authorities that it is their right to clear the bush and set up villages, then (in theory) they can rely on those authorities to defend those rights. If the other party were to start attacks to chase them away, they would simply have to inform authorities at higher levels and sit back and watch the government use force against their 'enemies'. In reality this is an insecure strategy as authorities appear to be unreliable and, on top of that, the bush is far away from the police headquarters. An attack may have already caused irrevocable disaster before outside help turns up. Although settlers, especially the chief of Yameda, point out the responsibilities of the authorities, at the same time they explain that they would never rely on them. "They acknowledge my position here, so they should protect me against attacks. But they are so far away …, that is why we started here with at least four men. You are too vulnerable when you are alone".[211]

Of course, persuading the authorities can also be used later in threats or even to generate more legitimacy to use violence yourself. On the other hand some sorts of threats can be used to underline the persuasion (see above).

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[209] Culturally speaking the Tupuri society is not a specifically violent or violence-rewarding one. Although they have the reputation of being a fierce group, this is only the case when they have to defend themselves.

[210] Of course this can also be an example of a (rather violent) threat.

[211] It should be said, though, that this remark referred to bandits and cattle theft and not to organised attacks by pastoralists with a view to asserting their rights.

Yielding

Although herders did not want to state too clearly that they could easily yield, to me they quite often explained that they still had other possibilities near the old camps and that relocating is the nomads' way of life. Their chiefs are annoyed by the situation, especially when they have already had to move a number of times. However, as they say themselves, "We nomads are used to moving. We are always searching for the best spot for our cattle. If it is not here, then we will go away."

This means they perceive the bush area not (yet) as terribly scarce. There is still pasture to be found. Of course they were afraid that such remarks would make their position weaker. On the other hand, they not only referred to other campsites nearby but also explained that they could go to Chad or Adamawa with their herds. Van der Ploeg (2001) mentions several Fulbe group leaders who first made a row about the occupation of their camp site, but afterwards withdrew to another spot. The *lawan* of Kolara has already started a process of changing the location of his herd from the Diamaré-Logone region to the grazing lands of Ngaoundéré, by buying cattle there and selling them in the current location.

Problem solving

The last possibility would be to try to solve the problem. Solving the problem means finding a way to use the bush to both parties' satisfaction or at least in such a way that both parties can live with it, perhaps in the form of a compromise. This may be based on mutual consensus or involve an outside arbiter who just imposes his decision. Everybody says that the sub-prefect or prefect should be the one to decide because it is he who represents "our father" - president Biya. In addition, this civil servant can bring in armed police if he wants to implement the delimitation of a certain area or protect settlers from incoming bands of herders. However, he does not seem to be neutral and has his own interests in the conflicts. Apart from that, the official policy is not clear. State law seems to be controversial in itself. On the one hand it supports customary law (although it is not clear whether this means the law of the pastoralists or of the cultivators) while, on the other hand, it supports the clearing of bush lands and thus new settlements by cultivators.

As long as authorities do not play a role as arbiters or, in a more positive way, mediators, parties have to resort to other methods. Consensus can also be reached with or without the help of others[212]. To reach a consensus, meetings should fulfil several conditions. Most of the time some help from outsiders is indispensable in order to start and maintain the process or to support an internal initiative. A consensus building process which has not been honestly organised, which raises false expectations or which cannot meet theoretically feasible expectations can as such be the trigger for aggression. A temporary solution like 'you may cultivate this bush parcel until you have harvested' overlooks reality and is bound to favour cultivators while giving pastoralists the impression they can rely on the authorities for their continuing use of the bush. Such moves destroy the trust of the parties involved in all sorts of authorities.

Social bonds are necessary within the two parties, as well as with surrounding 'mediators'. Relations between negotiators and the rest of the two parties should be clear and honest. A (perhaps only very minimal) linkage between the two parties will help, as will a good information gathering and distribution system, etc. The consensus building process in the Diamaré

[212] These 'others' need not necessarily be official authorities.

bush has reached only a very preliminary phase. As one of the settlers in Yameda explained, a meeting between cattle keepers and agriculturalists took place a year ago following an initiative by one of the regional NGOs. However, so far this has not resulted in anything constructive. In general, agriculturalists and pastoralists say they are willing to participate in a "bush platform".

Thus, a growing - but not yet overt - scarcity of land is causing irritations to grow. In the absence of proper management, the parties are trying to bend reality to suit their different purposes.

6

Baba Deli: moving borders, moving opinions

"You see these riverbeds? These used to be the boundaries of the grazing area. You see the millet field on the pasture side of these riverbeds? Its position asks for crop damage by cattle, don't you think? And you see these poles that indicate the new boundaries? Can you see how they have ruined them and tried to pull them out?" Yes I can see it all and I can see the different ways in which different users here try to claim rights to the land.

The vast territory of Dzambou, a Kapsiki village on the plateau in the middle range Mandara Mountains of the Far North of Cameroon (see Figure 6.1), has always been used for two different purposes, namely agriculture and cattle grazing. Apart from the fallow lands between the fields being used for cattle, a specific area was more or less set aside as a pasture reserve. For approximately ten years, however, several agriculturalists have been cutting trees and bushes in this zone to make space for new fields. Another group of Dzambou inhabitants are contesting this invasion heavily and are trying to formalise the status of the grazing lands. Decisions by the authorities regarding the boundaries of the pasture reserve and on the related user rights have met with resistance. Nevertheless, the Dzambou agriculturalists do not see the authorities as their adversaries. Instead they blame their pro-pasture co-inhabitants for manipulating the circumstances in their favour while disregarding the farmers' interests. More than once, pro-pasture Dzambou villagers and pro-field inhabitants have clashed with each other over crop damage, the crossing of boundaries or the delineation of these boundaries as such. Feelings are running higher and higher and somewhere in the future a real conflict can be expected.

In this chapter I focus on the analysis of this conflict by explaining the behaviour of Kapsiki in reaction to insecurities and (perceived) options in the studied region. The description will follow the steps of the VoE diagram in chapter 2 (see Figure 6.2). Thus, after an historical overview that is important to understand some of the influencing factors, I start an investigation into the insecurities facing the agriculturalists. In the third section I explore their different options for improving their situation. Thereafter I will focus on the specific investment described in Box 2 of the schema, namely intrusion into another niche, in this case intrusion into the former pas-

ture area. The fifth section describes the claims of the cultivators to this new area. Subsequently, in order to pinpoint the conflict (Box 3 of the schema), the focus will be on the opposing party. Their insecurities, their options for overcoming these, and their claims are described in section 6.6. I end this chapter with a description of options and motivations of both parties to resort to, or refrain from, violence (box 4 of the VoE model).

Figure 6.1 Mandara Mountains and plateau

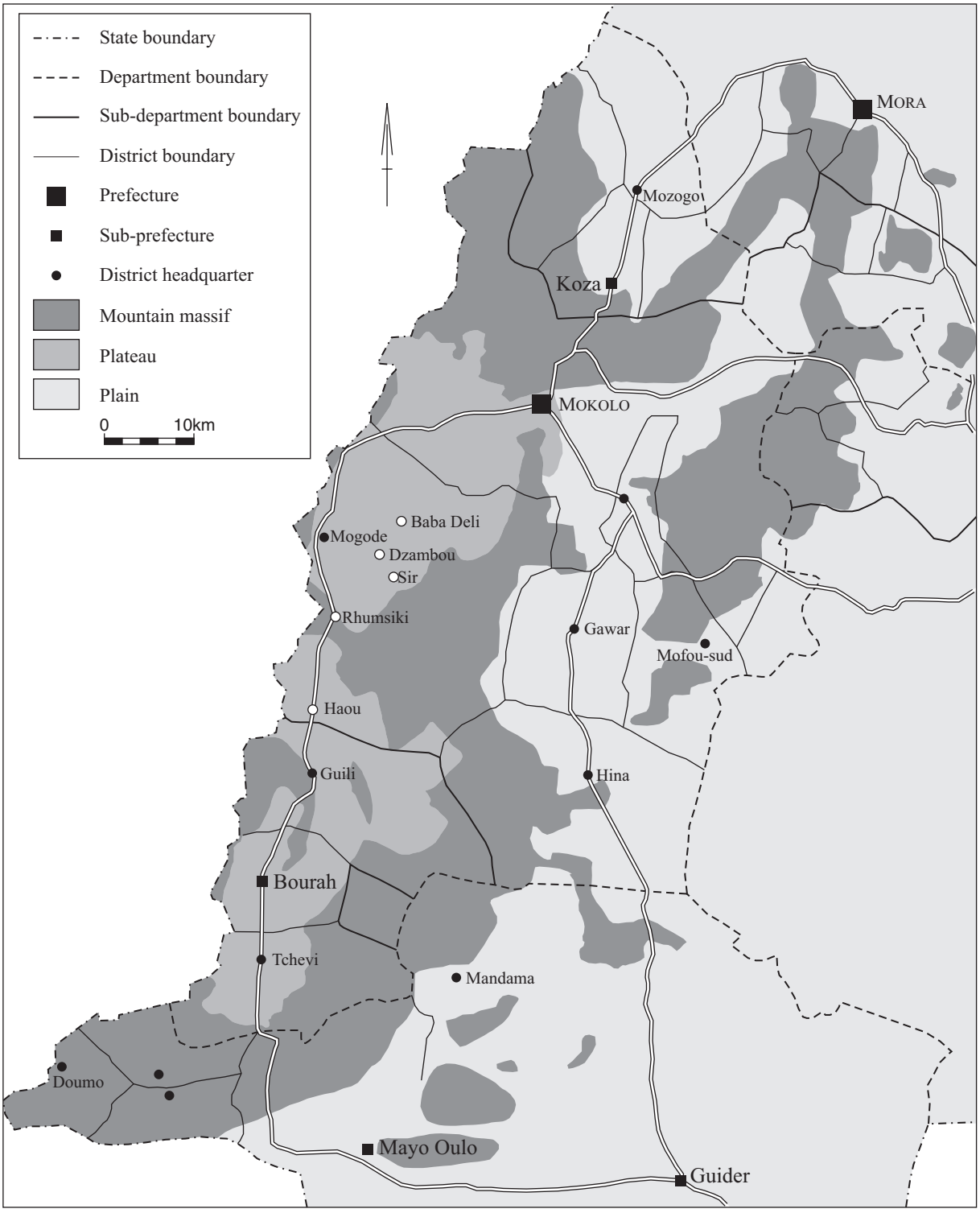
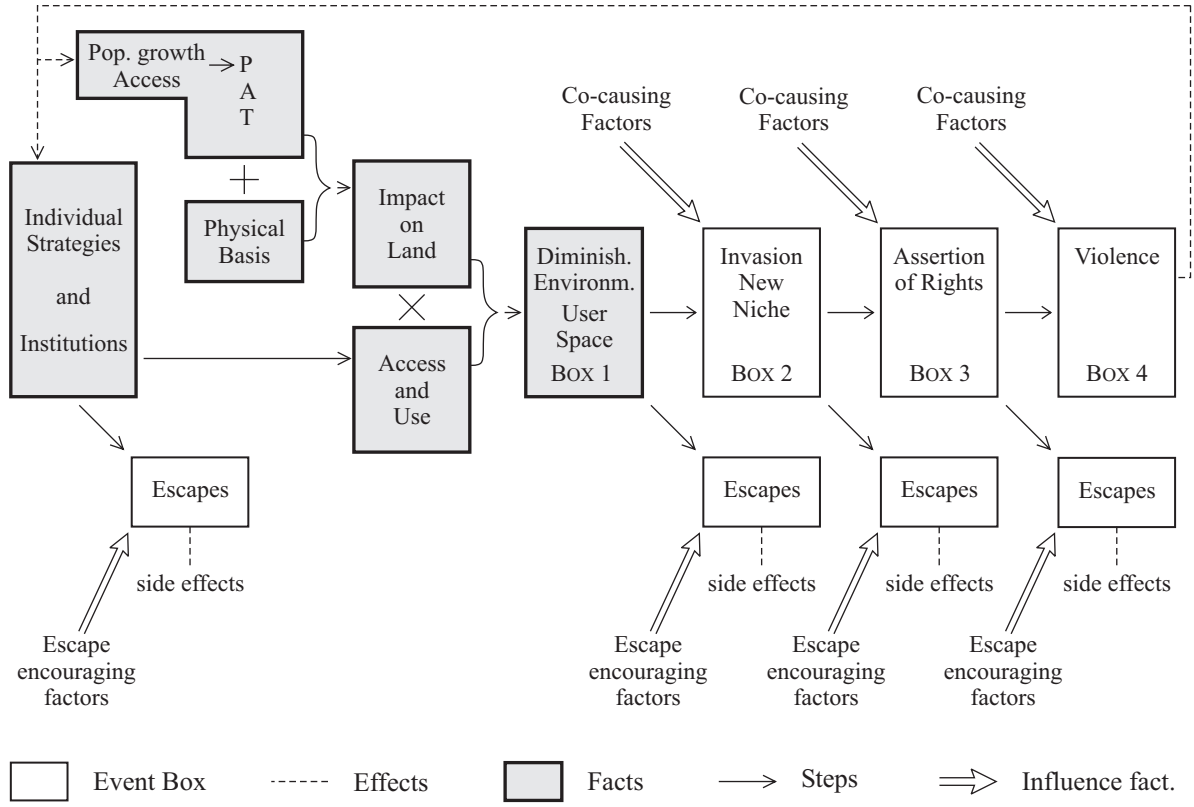


Figure 6.2 VoE diagram



6.1 Background: history of the region

Dzambou is a rural village on the plateau of the middle range Mandara Mountains of the Far North of Cameroon (see figure 6.2). It is inhabited by one ethnic group: the Kapsiki. According to Van Beek (1981) the oral history of the Kapsiki distinguishes two different areas of origin. One is the Nigerian village Babere, more than 200 km to the South-West. The other is the area of Gudur, in the East, between Mokolo and Maroua[1]. This eastern area of origin corresponds with the findings of Boulet (1984: 138) regarding their descent from the Mofu who came from the east (although further away). Generally speaking, the more northern Kapsiki, like those of Mogodé, Vité and Rhumzu, can trace their origins back to the Gudur area[2]. The more southern ones, like those of Rhumsiki and Sir, say they arrived from the west. Van Beek (1981: 118) concludes that the majority of Kapsiki villages certainly existed before the 19th century, and the most important migrations most probably took place before the start of the 18th century. This

[1] The Kapsiki society is divided into two castes: the blacksmiths (who also have an 'undertaker' role) and the rest. Origin stories of the two groups differ. The Kapsiki blacksmith are most probably all of Sukuru origin, in the north because that is where the centre of the iron operation was. Sukuru-founders are said to originate in the east (Gudur); see Van Beek (1981).

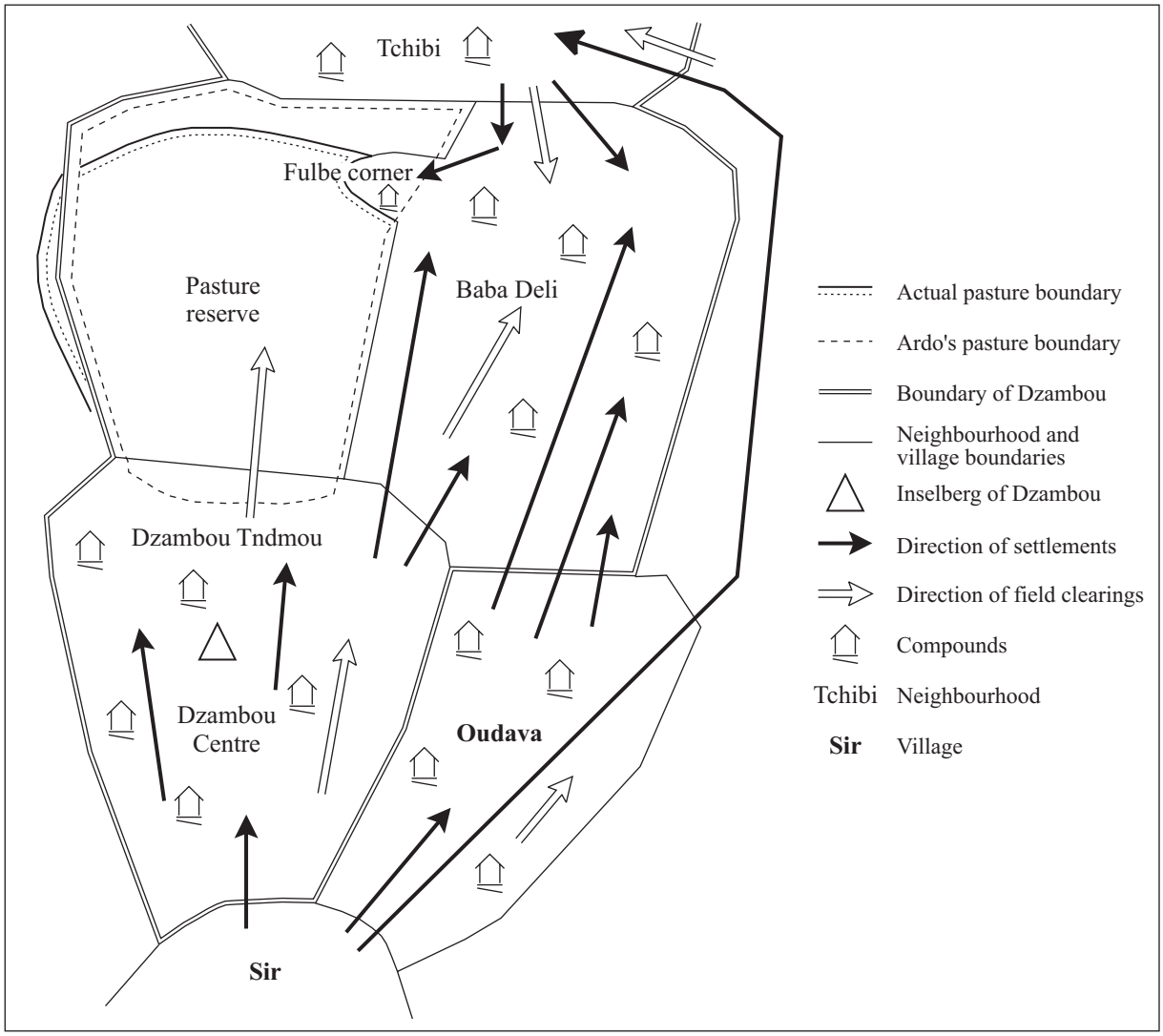
[2] Van Beek (1981) points out that the Northern Kapsiki may mention Gudur as an origin area because of the important religious role Gudur plays in the Kapsiki culture (like the Mecque of the Islam, the people explain).He is therefore more sure about the truth of the origin stories of the blacksmiths of the Kapsiki, than of non-blacksmiths.

corresponds with the migration time of the "course of the seventeenth century" mentioned by Boulet (1984: 138). Arriving in the Mandara Mountains, newcomers mingled with the autochthonous population to form their present ethnic group, long before the Fulbe conquered the region.

Because discords developed in the study area between two groups from the same village and the same ethnic group, it is not so much the settlement history of the whole district and the relation with other incoming groups that have to be clarified. I therefore focus on the history of the village itself.

The settlement's origins can be traced back over several generations, when Kapsiki people started to descend from the hilltops in the south, where they had sought shelter from the slave-raiding Fulbe conquerors (see chapter 4). First, in a period that was still dangerous, they only started to cultivate the fertile soils of the plateau. Depending on the energy and bravery of the men involved, more or less extended areas were cleared and set aside for future offspring.

Figure 6.3 Settlement pattern and neigbourhoods of Dzambou



When the general security situation improved because of the colonial control, the first bush-clearers brought their wives and children from the overcrowded origin area of Sir, a rocky hill-top, to the plateau and started to live in their fields. Later, whole groups of families descended, following the example of the first clearers, and they also established fields and houses on the plateau.

The genesis of the village neighbourhoods more or less followed a pattern of radial expansion northwards, in steps corresponding with semi-circles. Some individuals came down to the most northern part (Tchibi) first and moved back to the in-between area only later (see Fig. 6.3). The result of this expansion pattern is that the inhabitants of the outer area feel more brothership ties with the inhabitants of the corresponding (radial) part of the inner area than with other neighbouring 'pie-pieces'. The fact that the most eastward part of the inner circle, Oudava, belonged until recently to the village of origin, Sir, and is now an independent village means that bonds between people cut across these village boundaries.

Today Dzambou consists of one small neighbourhood (Tchibi, in the far north and separated from the rest by an extended bush area) and three big ones (see Fig. 6.3): Dzambou Centre, close to Sir, Dzambou Tndmou a bit to the north and Baba Deli, still further north and extending to the east where its southern part lines up with the northern boundary of the newly independent Oudava village. The Baba Deli territory is divided into two: one part is an extended zone composed of houses, fields and fallow land (as the rest of Dzambou) and the other is a big 'empty' bush area with, in a corner, a small settlement of mainly Islamic Kapsiki. This last hamlet is adjacent to the rest of the inhabited zone.

The so-called empty bush has been used as pasture for at least two generations now. All Dzambou inhabitants agree about the place of the boundaries of this area when it was first designated for (temporary) use as pasture. In addition, parts of it were and are used as fields because forefathers cleared large parts of the original forest[3]. Villagers claim that they cleared 'all' the parts.

Four years ago, the government-based organisation for the Mandara Mountains (MIDIMA[4]) declared the Baba Deli bush area, with a surface of ca 190 ha[5], to be an official forest and pasture reserve. For some years now, MIDIMA has been working on the reservation of forest areas in the Mountains in co-operation with the ministries of environment, agriculture and animal husbandry. For this purpose they mostly choose areas that are already forested. In this case they started to inform the population at the end of 1999. But, after they informed the population again at the beginning of 2000, it took some time before the next step was taken. Finally, in spring 2002, MIDIMA officials and the regional authorities again arranged some village meetings to inform the inhabitants about the plans. There was no option to say "no" to the whole project of 'instalment of a forest-pasture reserve', but the villagers were able to voice

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[3] Several of the inhabitants refer to their fathers' histories of extended forests that covered the plateau when they and their fathers came down from Sir for the first time to cut the trees. "When you climbed up the mountain *(i.e. the inselberg, see photo 6.1, RN)* and looked down, you could only see trees, from here to the mountains ridge in the east and all the way north", they say.

[4] *Mission de Développement Intégré des Monts Mandara*, based in the Ministry of Economic Affairs, Program Formation and Management of State Territory. This organisation has to organise the economic development of the region in general and to decide about what has to be done whit all the land that is not (yet) occupied. As a State institute it is strongly attached to official rules and laws.

[5] MIDIMA's calculation (September 2003).

opinions on where and how. The boundaries were agreed upon during one of the meetings in Mogodé (the district and sub-departmental capital, see Fig. 6.2) with both sub-department and district authorities as well as village representatives.

However, two months later, a village meeting at the spot, in Dzambou, resulted in a clash between two groups of inhabitants. They had gathered to start the implementation of the delineation of the forest-pasture reserve. The moment the representatives of the authorities arrived with pots of paint and pointed out the trees and rocks that had to be marked as a boundary sign, some people took the paintbrushes and set to work while others refused to cooperate. Angry scenes ensued and there was a lot of yelling and pushing and pulling and fighting with fists as both groups tried to implement what they thought to be the right action. The anger was triggered by the observation that the proposed boundary did not correspond with the one that had been decided upon during the Mogodé meeting. As perceived by the villagers, this new boundary favoured a group of inhabitants that had settled within the reserve and who could now go on living and cultivating there on the very fertile soil (see the place of the "Fulbe hamlet" in Fig 6.3). Of course, those were the ones who finally put up the boundary signs on the instructions of the authorities.

6.2 Insecurities: Box 1 and onwards

This section starts on the left-hand side of the VoE diagram (Fig. 6.1) with a description of Box 1, the diminishing environmental space (scarcity) for Kapsiki. The step from Box 1 to Box 2 is not only caused by environmental insecurities. It is a complex of personal, socio-political, economic and environmental factors and insecurities (see Chapter 3) that shape the strategies of Kapsiki. These are the influencing factors, mentioned in the VoE diagram, that decide whether or not the actors will enter into Box 2 or use an 'escape' route.

After a description of the environmental situation, I then deal with the other (possible) insecurities of Kapsiki, in human, economic and social domains.

6.2.1 Environmental insecurities (see chapter three for information on the five indicators used)

Physical basis

Soils

Like on the rest of the plateau, the soils of Dzambou rest on the volcanic basement of the Mandara Mountains, with its gneiss, anatexite and granite. The grounds are skeletal with many small stones. They have sparse inclusions of deep soils, dispersed in the areas where rocks appear in mountainous terrains. Local intrinsic fertility can differ tremendously due to differences in local conditions of pedogenesis and alteration products. The majority of the Dzambou soils are regosolic[6] with washed faces. The pedoclimate is dry, especially in the 'furrowed' zones. These soils have a very shallow usable level and deficiencies in their physical characteristics. In addition, there is a high risk of erosion. The amount of sand and small stones varies. In the East and North (the direction of Baba Deli) the soils contain less iron and are less fertile. According to Brabant and Gavaud (1985), the soils of the plateau are only suitable for

[6] A regosol is a type of azonal (with insufficient horizon development) soil consisting of shallow, medium to fine textured, unconsolidated parent material derived from freshly deposited alluvium or sands.

mountain agriculture and the production of subsistence crops. In reality, groundnut and some cotton production is possible.

Further to the east a small band of very sandy soils, with rough texture and again a dry pedoclimate can be found. However, although they also exhibit deficiencies in their physical properties and have high erosion risks, they are deep and thus less vulnerable than the more western soils. These soils have a colluvial origin[7]. With their marginal water reserves they are thought to be only marginally suitable for rain-fed agriculture, and for forest and pastures (Brabant & Gavaud 1985: *Cartes des Terres*).

The same properties and suitability can be found in the soils of Sir, the origin village, where many respondents still have family fields. There, the soils abruptly change from the regosolic soils in the North to two types of soils that merge here, one dominantly lithosols and one consisting of almost no developed soils. A very limited number of areas have an alluvial origin.

In the whole region, the soils along the riverbeds are of alluvial origin and are richer and suitable for more water dependent crops such as potatoes, rice and fruit trees. The general data about soil fertility does not give enough information about individual situations. Nor does it provide us with an insight into the perception of farmers of their own fields. However, this general data shows that a dry period will seriously affect the production possibilities of the farmers, because of the low water capacity of the soils.

The vulnerability of the soils to drought and erosion, and thus to loss of production capacity, is enhanced by the hilly aspect of the region. The area does not have really steep slopes (except for some inselbergs with foot slopes of 45 percent and cones that arise more or less vertically (Photo 6.1: see the centre pages of this book), but at least half of it extends over low hills. Most of the land has a slope that does not exceed four percent, but some slopes can be as steep as ten percent.

Without special measures, here the soil is washed away quickly when the natural cover has gone. According to extension workers and certain more educated villagers, over the generations terrace-building knowledge and capacities have declined, so now even low degree slopes suffer from erosion. The nutrients are transported to low lying parts in the terrain where they are carried off by streams or lay unused because of the risk of flooding when rainfall should be higher then usual.

Climate

As explained in Chapter 4 (and also in Chapter 7) the Mandara Mountains receive a higher precipitation, have lower temperatures and lower temperature extremes than are expected at this latitude. Nevertheless, differences in precipitation per locality are as great as in the rest of the Sahel-Sudan zone. Data from the two nearest pluviometric stations - those of Sir and Mogodé - concerning the second half of the 1990s[8] show that Mogodé, which is only 8 km to the north and 13 km to the west (see Fig. 6.2) and is at a slightly higher altitude[9], has totally different

[7] CPCS and FAO call this 'washed tropical soils of colluvial origin' and 'ferruginous' or 'white luvisol' (see Brabant and Gavaud 1985).

[8] This period is considered as a time that 'normal' precipitation was finally restored in the Sahel and Sahel-Sudan zone after the drought years of the 1970s and 1980s. In this big region, 1997 and 1998 are even considered as relatively wet, as also reflected by the data in table 6.2.1.

[9] Sir lies at an altitude of 920 m and Mogodé at 850 m.

precipitation rates to Sir. The precipitation is higher or lower without any significant pattern, although in Mogodé the rainfall generally seems to be less (See Table 6.2.1).

Table 6.2.1 *Precipitation in Sir and Mogodé and differences over the years 1995 – 2002* (the minus sign in the 'difference' row means that Sir precipitation was less than that of Mogodé; no sign means the reverse).[10]

	1995	1996	1997	1998	1999	2000	2001	2002	mean
Sir	896	794	1287	1133	1066	1282	1286	935	1085
Mogodé	991	830	1182	1068	735	820	1049	1039	964
difference	-95	-36	105	65	331	462	237	-104	121

The yearly mean fluctuates around the 1000 mm (see also Table 7.2.1), but over the years, during the years and throughout the region, precipitation differs enormously and unpredictably (see Figure 6.4).

Figure 6.4 *Mobile average precipitation over 5 years in Sir and years with poor spread of rainfall* (black dots).

According to the inhabitants of Dzambou, rainfall has diminished over the years. "Apart from occasional outbursts, like the one we had seven years ago, that washed away many houses and crops, the amount of rain is far less than what we were used to in the past, when I was young."[11], several respondents remarked. The younger ones refer to the stories of their fathers and grandfathers about the abundance of rain and year-round river water. This goes as far as "Then they could fish in this river[12] until April." Most probably they were referring to a longer rainy season and therefore greater infiltration.

[10] Source: Beauvillain (1995) and data from the agricultural service Mogodé and Catholic Mission Sir.

[11] "Seven years ago" refers to 1995.

[12] In January 2003 "this river", the one that (between other things) forms the boundary between Oudava and Baba Deli, was already no more than a dry bed.

Indeed, the precipitation pattern before the 1970s seemed to have been satisfactory. Nevertheless, even at the end of the 1950s the North of Cameroon suffered from a drought (see Figure 4.3).

At the same time, the farmers explain that not only the amount of rain or the number of months is important. In the whole of Dzambou, farmers refer to the year 2002 as a dry year ("The water in the rivers will disappear earlier this year, and perhaps even the deep-dug water wells will run dry before the new rains"), but for agriculture it was good enough, because the rain fell evenly divided over the days. "Each time the crops needed water, it came down". But, as they realise fairly well, the reverse can also be the case. Table 6.2.6 shows the absence of a correlation between total year precipitation and production (when precipitation is within the normal range). The two years with the highest precipitation have the lowest grain production.

In general the flow of surface water of Mogodé sub-department is to the south-east although on a lower scale level, water may flow in another direction due to the position of slopes. The groundwater flow is south-east as well. This means that part of the water availability depends on run-off from the north. Unfortunately the precipitation in the north is less than in the area itself.

In short, soil types and the location of soils, the high erosion risk as well as the variability of the precipitation and water availability makes the area an insecure one as far as agriculture is concerned.

Population density

Although the sub-department of Mogodé was only created after 1991, the chieftaincy (*lamidat*) of the same name can be used as a reference to trace back population growth because the two have the same territory. Table 6.2.2 shows the population densities in the study area over the years. Differences in population density in the Mogodé sub-department are considerable[13]: from vast areas with almost no inhabitants at all to local zones with more than 150 inhabitants per km^2. Apart from the sub-departmental capital, Mogodé proper, one of these last is the territory of Sir. 'Empty' zones are the areas which, up until now, have been dedicated to pastoral use.

Two or three generations ago the whole of Dzambou region, but especially the northern parts, could be considered as empty. In Dzambou Centre some houses must have been present at the end of the 19^{th} century and the beginning of the 20^{th} century because that was the period during which the first babies were born there. Based on the birthplaces of respondents, their fathers and grandfathers, over the years a minimal number of houses per area can be deduced[14]. Although this amount has obviously increased, even today the population density is not very high (Table 6.2.2).

According to calculations of Dietz *et al* (2001), in the Sahel-Sudan zone a farmer can subsist on 0.25 ha of arable land per person. Dependant on soil type, to maintain field fertility

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[13] As in the whole department: the plateaux as a whole are relatively sparsely inhabited, while the steep northern Mandara Mountains have a high population density (see Van Andel (1998) or Zuiderwijk (1998)).

[14] In 1945, only one house was constructed in the Baba Deli area and in the Tndmou area. More to the south at least nine houses had already been constructed. In the two northern areas the number of houses had grown to five by the end of the 1950s. Dzambou centre increased to approximately 12 households in 1959.

when no chemical fertilisers are available, at least 0.5 ha should be added for fallow rotation[15]. Even then, in the Dzambou region, each family should be able to do more than feed itself, having (on average) 3 ha to use per person.

Table 6.2.2 *Development of population densities in the study region* compared to the Province and mountains as a whole (sources: Beauvillain (1989: 590) and Djonwé (2001) and own survey 2002-2003).

	Surface (km^2)	1945 Inhab/km^2	1959 Inhab/km^2	1976 Inhab/km^2	1995 Inhab/km^2	2002 Inhab/km^2
Dzambou	44	2[a]	5	n.av.	n.av.	33[b]
Mogodé	736	21	33	42	70	90[c]
Mandara	7,660	n.av	44	72	101	115[c]
Far North Province	48,125	n.av.	23	41	67	80[c]

[a] = In 1945, in addition to the existence of some houses (11), many fields had already been cleared and were in use in the Dzambou area: 76 % of respondents' grandfathers were born in Sir. Most of them created fields on the plateau next to that hilltop when they had grown up

[b] = In 2002, Dzambou village comprised 184 households with approximately 7.8 persons per household (a total of 1435 persons)

[c] = Estimations (the last country population survey dates from 1987)

However, the Kapsiki plateau, although not a real mountain area, does have mountainous aspects. Some parts are too stony or too steep for cultivation, some parts are wide riverbeds or low-lying, wetland-type lands in normal precipitation years. Based on observations in the field, the surface not suitable for agriculture is estimated at 10 % of the total[16]. Most of the steep and stony parts are suitable for grazing, especially for small ruminants, although nothing grows on the stones themselves. Thus, 40 km^2 remains available for use which is still 2.7 ha per person.

Land availability

The whole of Dzambou territory extends over 44 km2 (see Table 6.2.2). In 2002, 2020 ha thereof were used for agriculture[17]. Apart from a small proportion that is too steep (far less than 10 %: see above) the rest, being 1980 ha, is available for animal grazing. This seems to be a situation of abundance.

Yet, the growing population means the land available per person is diminishing. In addition, land is not evenly divided over the families. Some households dispose of extended fields that have to be shared with only a small number of people while others own only a small area. Moreover, the location and spread of fields over the total area differs per family. This influences production possibilities as the fertility of the soils varies greatly and "far-away" fields are less easily maintained and cropped, or protected from wild or grazing farm animals.

Some farmers do not use their bush fields, either because they are too far away, or because they are situated within the forest-pasture boundaries. They sometimes prefer to rent land. Sometimes this is only temporarily. Once a fallow period has restored the fertility levels of their own fields they use them again. Table 6.2.3 shows the ownership of land among respon-

[15] Rough estimate, based on the mean rotation scheme noticed in the village.

[16] Own observations, February 2000 – February 2003.

[17] Data of the Agricultural service of Mogodé.

dents (almost all household-heads) and their forefathers, as well as used and fallow lands. Because families, and therefore respondents, used to judge their property in terms of fields instead of in hectares these figures can only be used to compare the current situation with that of the past, not to compare property with the actual surface area.

6.2.3 *Surface (in fields and ha) and ways of acquiring land* per category of respondents, their father or grand father, and within or across village boundaries. NB the numbers of fields shown should not be added to the given ha because respondents indicated the areas they had acquired in one of the two ways[18].

	Place of fields	Bought[a]		Inherited[a]		Cleared[a]		Shared[b]	
		Surface (ha)	Number of fields	Surface ((ha)	Surface of fields	Number ha)	Surface of fields	Number (ha)	Surface of fields
Respondents (n = 180)	Dzambou	68.3	26	69.5	43	41.3[c]	41[c]	146	503
	Outside Dzambou	0	0	0	31	1.8[c]	27[c]	36.5	369
Fathers (n = 166)	Dzambou	31.5	17	15.8	27	132.8	271.5	80	258
	Outside Dzambou	0.25	2	0	50	27	124	17.3	396
Grand-fathers (n = 143)	Dzambou	0	1	0	8	87.8	309	0.8	22
	Outside Dzambou	0	1	0	95	16.5	511	0	13

[a] = These three columns refer to privately owned fields

[b] = 'Shared' means fields are collectively shared with other family members

[c] = The number of respondents who cleared fields themselves is 35 (19%); all of them performed this work when they were young. They are now more or less over 50 years of age, except for two young Fulbe men from the 'Fulbe settlement' in the Baba Deli neighbourhood (40 and 27 years[19]). Because the men aged 50 started their clearing exercises when very young (at 15 or so), one can deduce that new clearing was possible up until the mid 1960s

The table shows that field clearing was done by fathers and grandfathers. Later, all the land had been already opened up and the current generation of farmers had to rely on other methods to increase the size of their property. At the same time, the table shows a kind of concentration towards Dzambou territory over the generations. The fact that most grandfathers started their agricultural life in Sir (that is outside Dzambou) and certainly cleared fields there is clearly shown.

Although people bought or inherited fields to enhance their arable surface, these transactions diminished the surface of other persons and families. Most of the time, purchasing turns out not to result in a more evenly division of fields among the inhabitants since only the rich could (and can) afford to buy. There are several families who started letting fields, gained a lot of money by doing so and then added to their already sufficient surface by buying more. They

[18] Surface of fields can differ tremendously from respondent to respondent, but not over the generations within one family. Field surface can range from 1 ha to more than 5 ha.

[19] These two are cattle keepers who started cultivating when grown up. They do not know the difference between primary and secondary forest and they assumed that they cleared their plots as first clearers. However, Kapsiki cultivators tell me that their fields were already cleared from vegetation in the past. One of them was given a plot in the direction of Sir by the *lawan* of the Fulbe settlements. This field was originally in the possession of the *lawan* himself, having been cleared by his father.

were also able to benefit from long fallow periods and the subsequently high production of crops that could be sold at the market.

Table 6.2.4 *Surface of arable land per class of obtaining* over three generations (n of respondents = 180, but 15 of them do not know at all; 14 times they do not know about their fathers and 37 times not about their grandfathers); surface in ha and fields (f).

	Mean surface	Range of surface	No of persons that bought	Mean surface bought	No of persons that inherited	Mean surface inherited	No of persons that cleared	Mean surface cleared
Respondents (privately owned fields)	4.5 ha +4.4 f	0.5 - 13.8 ha + 1-10 f	48	1.4 ha + 0.5 f	37	1.9 ha + 2 f	35	1.2 ha + 1.9 f
Respondents (shared fields)	1.5 ha + 7.4 f	0.8 - 18 ha + 1-32 f	n.a.	n.a.	118	1.5 ha + 7.4 f	n.a.	n.a.
Respondents (rented or borr. fields)n = 62	0.9 ha	0.13 - 2 ha	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Fathers (owned fields)	3.6 ha + 8.5 f	0.5 18 ha + - 1-15 f	24	1.3 ha + 0.8 f.	17	0.9 ha + 4.5 f	123	1.3 ha + 3.2 f
Fathers (shared fields)	1.0 ha + 6.9 f	0.8 - 11.8 ha + 1-50 f	n.a.	n.a.	95	1.0 ha + 6.9 f	n.a	n.a.
Grandfathers (owned fields)	0.8 ha + 18.6 f	0.8 11.8 ha+ -1-50 f	2	0 + 1 f.	9	0 qu + 11.4 f	133	0.8 ha + 6.2 f
Grandfathers (shared fields)	0.13 ha + 5.8 f	0.01- 0.8 ha + 2-10 f	n.a.	n.a.	6	0.13 ha + 5.8 f	n.a.	n.a.
Respondents (cropped fields).	1.8 ha	0.13 - 6.5 ha	n.a.	n.a.	n.a..	n.a.	n.a.	n.a.
Respondents (fallow fields)[b]	0.5 ha	0 - 6 ha	n.a.	n.a.	n.a..	n.a.	n.a.	n.a.

[a] = Information about renting or borrowing by former generations is only sporadically available (mostly only about compound fields of fathers). For that reason I left it out of this table

[b] = The number of fields indicated here by respondents reflects only the short-term fallow periods that respondents think of when asked. They do not think of long-term, more family-field related fallow.

The number and surface of shared fields in the generation of the respondents and that of their fathers seems to be approximately the same (Table 6.2.4), but the number of people sharing differs over these two generations because the total number of persons has increased. On average fathers had to share their fields with 3.4 brothers, respondents with 3.5 brothers plus all the 3.5 sons of their 3.4 uncles and the current generation will have to share with, again, 2.7 brothers and the off-spring of uncles etc.[20]. So, what was used by only one household-head in the time of grandfathers now has to be shared with 12 household-heads. In the future this will simply rise to 32 or more.

[20] This number is somewhat lower because this generation is not yet complete, with 48 % of households heads under 50 years of age.

Commoditisation of land

Although buying occurs more often than in the past, prices do not reflect a land market as such (see section 3.1.2, Table 6.3.3). The idea of quickly rising prices is a perception of the cultivators that increases their feeling of insecurity with regard to access to land.

The fact that more land is demanded than is available can be seen from the rapid rise in the position of land as a commodity. Tables 6.2.3 and 6.2.4 show that land sales started two generations ago, but only gained in importance over the years. In general, the insecurities of especially the poorer families with regard to access to land are increasing. The rise in the value of land due to a greater number of sales means the practice of lending land for free is diminishing. In the past, renting cost at most two chickens and a jar of beer per year. Nowadays rent prices have increased to between 10,000 and 40,000 Fcfa/ha. Nevertheless, it is still possible to borrow at what was called a renting price in the past. Some field owners (and renters) consider compound fields to have more value and ask (or pay) more for them. For example, one respondent expressed his willingness to pay twice as much for a compound field as for a field in the bush of the same surface and fertility.

Calorific needs and production

Amount of production

The production figures for Dzambou are based on 2 different sources: one is the production as recorded by the researcher according to the respondents (that is, based on memory and estimation). Most of the farmers can only recall the production of last year and the year before (see Table 6.2.5). The second source, recorded in Table 6.2.6, is the production figures of the village over the years recorded by the sub-departmental agricultural service (in Mogodé[21]).

Apart from maize the agricultural production is lower than the North Cameroon mean yield for 1988-1989, and there is no downward trend in production per ha (see Table 6.2.6). The sorghum production is especially low. This can be due to the mixed cropping system used by Kapsiki, which spreads risks and is environmentally sounder. The farmers claim that the production of beans and groundnuts make up for a low grain production in 'bad' years, because in such years these products can grow better, while the grain plants do not provide that much shadow. Table 6.2.6 confirms this expectation for beans in exceptionally bad years, such as in 2000. However, the data given by the respondents themselves over that year is strikingly different from that of the agricultural service and do not even confirm that 2000 was a bad year[22].

Another (or added) reason for the lower sorghum production can be that the overall (North Cameroon) mean is high because of the high production in some preferable areas, such as parts of the Diamaré, south of Maroua[23]. In spite of the relatively stable outputs, the farmers encounter insecurities with regard to production. On an individual or group level incidental causes, such

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[21] Although Sir region officially has a regional representative from the agricultural service, during the last two years this civil servant was out of office due to training.

[22] If we assume that the figures of the agricultural service are true, the higher data given by the respondents would indicate that the inhabitants 'forget' difficult years. However, it is more probable that the service data are somewhat unreal, because they are based on extrapolations of a restricted amount of measurements.

[23] According to De Steenhuijsen Piters (1995) sorghum yield in the Diamaré (Gaban) was 1600-2500 kg/ha. On the other hand Chapter 5 showed that the rain-fed sorghum production in Kolara in 2000 was 856 kg/ha (and in 1999: 959 kg/ha); only slightly higher than on the plateau.

as monkeys in the neighbourhood of the inselbergs, can cause a crop failure. In the year 2000, caterpillars devastated the young sorghum plants of more than one cultivator. Table 6.2.6 also shows the absence of a correlation between total year precipitation and production.

Table 6.2.5 *Production and surface used by respondents' households (n = 180) over two years.*

	Production in 2000			Production in 2001		
	Mean/ household (in kg)	Mean/ household (in ha)	Prod/surf. in kg/ha	Mean/ household (in kg)	Mean/ household (in ha)	Prod/surf. in kg/ha
Sorghum	465.2	0.6	789.6	436.4	0.7	618.4
Maize	391	0.3	1386.3	394.2	0.3	1175.9
Rice	34.7	0.03	1285.4	42.6	0.05	882.6
Groundnuts	200.8	0.3	719.8	284.9	0.4	728.1
Beans	78.0	0.1	650.7	102.1	0.2	438.8
Bamb nuts[a]	14.0	0.01	806.5	11.7	0.05	223.4
Total	1183.7	1.3	913.2	1271.9	1.7	720.4
Fallow[b]	n.a.	0.08	n.a.	n.a.	0.5	n.a.
cereals	891.0	0.9	993.3	873.2	1.05	801.7

[a] = These figures are most probably underestimated. Bambara groundnut is a typical women's crop, but mostly recorded here by male household heads. Although checked where possible by asking the wives, several production figures are only guesses or are not known at all

[b] = These figures only show the fallow periods of fields the respondent feels (s)he left fallow (herself) himself. That is, fields shared with extended family and over which the respondent has no power to decide are often forgotten. The data not included are the ten times that respondents explained "the rest" to be fallow in 2001 and the five times they did so in 2000

Table 6.2.6 *Production per surface area (kg/ha) of four main crops in Dzambou* (over the last 5 years and with the average of North Cameroon as a comparison) set against yearly precipitation.(Source: the Agricultural Service of Mogodé district, not published, and Ali *et al* (1997) for the mean production[24]).

	1998	1999	2000[a]	2001[a]	2002	Mean North Cameroon prod. (88/89)
Sorghum	725	1,030	470 (790)	650 (618)	700	1,130
Maize	1,275	2,050	800 (1386)	1,100 (1176)	1,300	740
Groundnuts	600	600	500 (720)	790 (728)	925	820
Beans	600	850	1,010 (651)	675 (439)	650	670
Year precipitation	1,133	1,066	1,282	1,286	935	n.a.

[a] = Between brackets the production as it is given by the respondents (see Table 6.2.5)

[24] The figures of Ali, Peters and Fozein (1997) are those for 1988-1989, published in the regional analysis (1995) of SNV (a Dutch development NGO that works in Cameroon). FAO statistics has counted a mean production for the whole of Cameroon during the 1990s of 869 kg/ha for sorghum, 1745 kg/ha for maize, 407 kg/ha for groundnuts and 838 kg/ha for beans. During the first years of the new century productions were higher with means over 2000 – 2003 being: sorghum 1201 kg/ha, maize 2404 kg/ha, groundnuts 1076 kg/ha and beans 848 kg/ha.

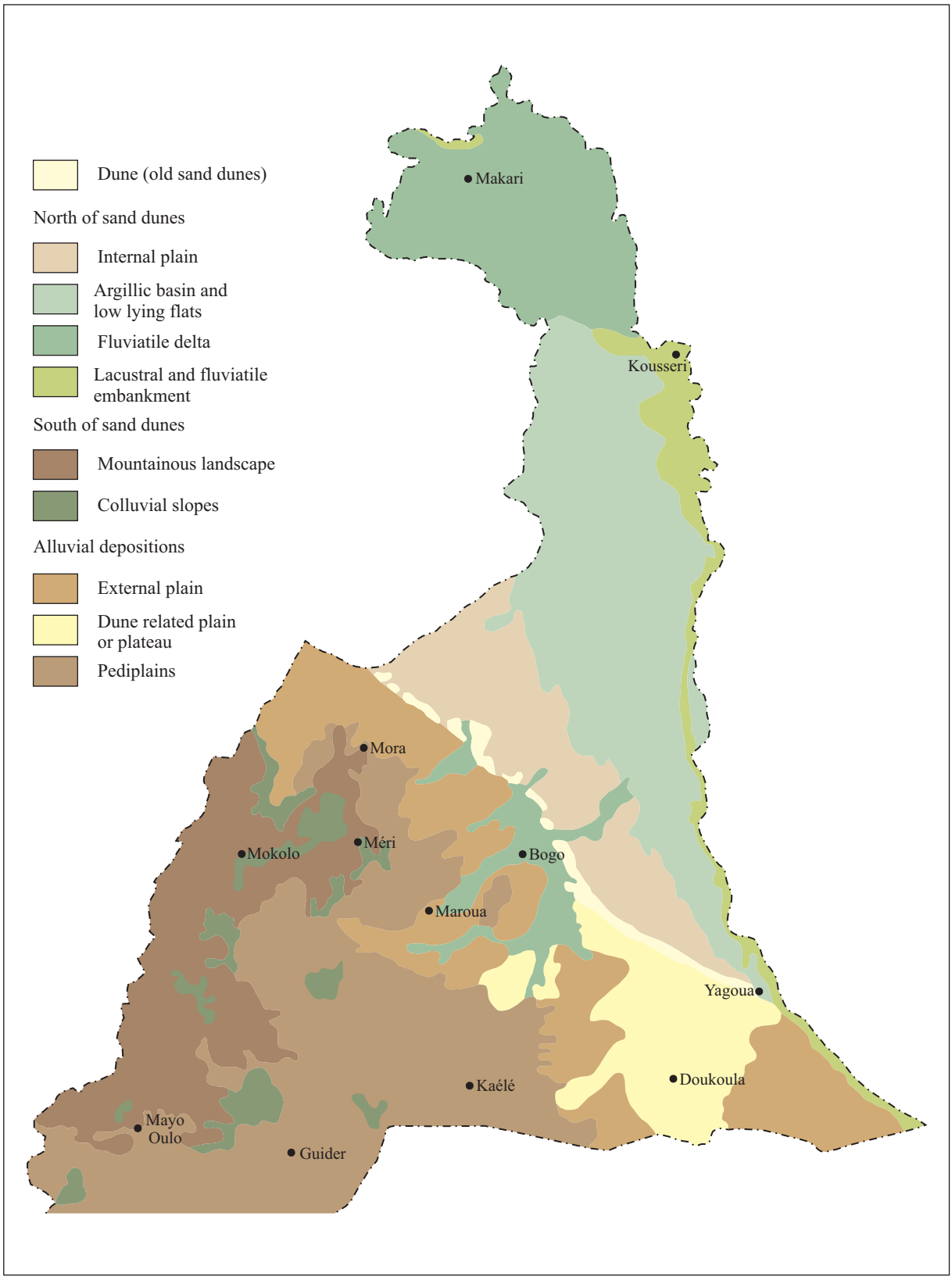

Figure 4.4 *Main geographical relief forms* (see page 95)

Photo 5.1 *New settlement Yameda* (see page 168)

Photo 6.1 *Cattle on their way to the river pass the Dzambou inselberg* (see page 211)

Photo 7.1 *Bana showing the original boundary between Oudda and Kila* (see page 320)

Two other important crops for Kapsiki are potatoes and sweet potatoes (see Table 6.2.7). These are produced for people's own consumption. Only on very rare occasions (mostly in case of a sudden surplus) do farmers try to sell them. They are insecure crops that need a specific amount of water in the soil during growth. In general only low-lying fields or those adjacent to river(bed)s are suitable. When the rains turn out to be abundant, these fields can easily become too wet. In addition, during storage these crops can suffer from too much humidity in the soil, while they are stored in a hole in the ground covered by soil. This makes them also vulnerable to insects and termites.

Table 6.2.7 Production of potatoes and sweet potatoes.

	2000			2001		
	Total production (in kg)	Used surface (in ha)	Number of cultivators	Total production (in kg)	Used surface (in ha)	Number of cultivators
Potatoes	1,125	1	11	3,560	1.7	18
Sweet potatoes	6,910	4.25	46	10,285	5.7	62
Total[a]	8,035	5.25	57	13,845	7.4	80

[a] = In 2000 seven respondents cultivated both potatoes and sweet potatoes. In 2001 this number was eight.

In addition, these crops are vulnerable to pests in the soil during growth. To avoid the build up of, for example, potato eels, the production can only be continued on the same spot for two or three years at a time. If there is no suitable surface, either the farmer has to choose, beforehand, for a lack of these additional calories[25] or (s)he has to take the risk of producing too often on the same spot.

In the village a diversity of other products is cultivated, but in very small quantities and these are very different per household. According to the Agricultural Service of Mogodé, the whole village produced two tons of manioc and 1.7 tons of taro in 2002, but almost none of the people interviewed mentioned these products. They mention melon or other vegetables, like aubergine or onions, when they cultivate them, but none of these really add up to calorie consumption. Soybeans could help (also to add protein), but up until now these have only been produced by three or four inhabitants[26].

Needs

Because Kapsiki consider only cereals to be a real meal, they express their needs in bags of cereals. Table 6.2.8 compares the amount of cereal kgs needed per household according to the respondents with what is produced and with what the FAO has calculated as sufficient, if only

[25] Potatoes and sweet potatoes contain 700 - 950 cal/kg. The hundred or two hundred kg per producer can therefore add a substantial amount of calories. And they are rich in protein.

[26] Data from the Agricultural Service mentions the absence of soybeans production until 2002: 0.4 ton compared to 0.6 ha. See also section 3.1.1. below.

cereals are eaten[27]. The mean production per household is more than the household heads indicate they need, except for Baba Deli in 2001 (but that followed a surplus in 2000).

Table 6.2.8 *Needs and production of cereals per average household (in kg)*, according to the personal per ception of the respondents and the calculation of the FAO.

	Baba Deli					Rest Dzambou				
	Household members		Needed	Produced		Household members		Needed	Produced	
	Adult	Kid		2000	2001	Adult	Kid		2000	2001
According to respondents	3.7	3.5	908	1,059	897	3.4	3.7	913	914	922
According to FAO	n.a.	n.a.	1,647	n.a.	n.a.	n.a.	n.a.	1,472	n.a.	n.a.

If there is a shortage, this can be made up for by buying a bag of sorghum at the market. For the richer inhabitants this does not cause any problems. It is the poorer villagers who encounter difficulties and it is this group especially that suffers a shortage of grains (see also Table 6.2.10). In addition, this group does not have enough fields to counter-play the shortage by means of a high groundnut or bean yield which they can sell. Or, if they have a surplus, they have no time to wait until the best period to sell it and buy what they need. Once again, they do not have (small) animals to serve as a safety net.

The problem is that prices of surplus products decrease while those with a low yield increase. When cereals production is low, farmers try to sell more groundnuts and (or) beans. Sometimes (as can be seen in Table 6.2.6) the yields of these crops are also low. Then the price is good, but the sale per household remains low. In other years the production of these crops is good. Then everybody tries to sell and the price goes down. Thus, buying additional cereals with the help of money gained with beans and groundnuts is an insecure and not very profitable undertaking.

Table 6.2.9 *Comparison of calorific needs (according to FAO-norms) and calorific production per (mean) household per year*

	Kcal needed	Kcal produced 2000	Kcal produced 2001
Baba Deli	5,435,246	5,390,303	5,101,233
Dzambou rest	4,856,687	4,762,912	4,990,604
Total village	5,145,966	5,076,608	5,045,919

On the other hand calorific needs can also be provided for by the cultivated beans, groundnuts and tuberous plants. As can be seen in the production tables 6.2.6 and 6.2.7, Kapsiki pro-

[27] With a mean household composition of 3.6 adults and 3.6 children the calorific need per household according to the FAO norms is 15,012 kcal/day (calorific need is 2500 kcal/adult (2300/woman and 2800/man) and 1670 kcal/per child per day; 1 kg cereals contains 3342 kcal (3000-3600 kcal).

duce a lot more than only cereals. Table 6.2.9 is an overview of calorific needs and total calorific production in agriculture.

As has already been mentioned, all sorts of animal products (eggs, meat and milk of own animals or bought at the market, as well as fish from the market) can add to the diet, but mostly those people with a lack of agricultural production are not the ones with a substantial herd of farm animals. The consumption of wild products is not restricted to only poor or rich inhabitants. It depends more on the household composition: children between 8 and 15 consider the gathering to be a game. Such families dispose of high quality food with high protein content (but mostly not very much in calorific terms) especially when insects (termites or grasshoppers) or animals (mice) can be caught.

With the calorific needs already almost met by the crop production and with an additional calorie supply from other sources, Dzambou village as a whole did not encounter any calorific difficulties over the last two years. In Baba Deli the situation is worse, especially because the shortage has hit the neighbourhood for two consecutive years. But within the village a high percentage of households faced a shortage of calories; sometimes even severe shortages (see Table 6.2.10). Of those that had two consecutive years of shortage of produced calories, only four percent[28] had enough farm animals to make up the shortage with calories from milk and/or meat while two percent could make up for missing calories with milk or meat in only one of the two years[29].

Table 6.2.10 Percentage of households without enough cereals or calories from agricultural production.

	Not enough cereals[a]			Not enough calories[b]		
	2000	2001	Both years	2000	2001	Both years
Baba Deli	37	52	25	49	51	39
Dzambou rest	54	49	40	65	51	44
Total	46	51	33	57	51	42

[a] = People's perception of need measured against production
[b] = FAO based calculation of need measured against production

One of the households at risk is that of Teri of Baba Deli. At an age of 38 he has two wives and seven children, six of which are under school age. The household owns 2.5 ha and therefore meets the required 0.25 ha per person. However, in the two years under study Teri and his wives did not produce enough calories to feed the family, although they dispose of a plough and a donkey to increase the cultivated surface and sow at the right time. In 2000 in particular the deficit was considerable, being almost half of what was needed. Teri says he can supply food by selling some of his goats, but he cannot supply enough calories by

[28] Percentages of whole population.

[29] The range of the number of calories lacking was broad: from less than 60,000 kcal to more than 5,000,000 kcal. The importance thereof depends on the size of the involved family. A bigger family can stand a bigger shortage because the per capita shortage is less. However, the number of persons who are undernourished is then bigger.

normal off-take. As a result, the shortage he experienced during these two years meant his flock decreased. In addition, he lost three sheep because of diseases and one sheep and a donkey due to theft (see also Table 6.2.11). He fears for his future and that of his children, but has no solution for the problem.

In short, the general land availability and the mean production may give rise to the idea that Dzambou does not suffer from a shortage in either of these respects. However, differences between different families and households are substantial. A poor production year or a reduction in the arable surface area may push those who are already on the margin over the edge.

6.2.2 Human domain insecurities

Health insecurities

Especially in the two northern neighbourhoods of Dzambou (Baba Deli and Tndmou) people complain about the lack of a medical post. The nearest hospital – of the Catholic Mission - is in Sir, which for them is ten or more km away across hilly terrain. In the rainy season the majority of these neighbourhoods are isolated from the south by big rivers. Also the alternative hospital in Mogodé is not reachable in the rainy season. The rest of the village has reasonable access to the hospital in Sir. Prices are not that high and the staff are well educated. Even patients from Mogodé sometimes undertake the long journey to receive better help for lower prices. Nevertheless, for more complicated illnesses and surgery the nearest hospital is in Mokolo, more then 30 km away.

Hygienic drinking water, in the form of a closed pump, is only available in Dzambou Centre, south of the inselberg. However, even there people complain about a lack of water wells. Many households depend on open wells or rivers. During the second half of the dry season, the distances people have to walk to watering locations increase, sometimes to more than 1 hour's walk. Several of the most important diseases are water related. Almost all open wells are contaminated by amoebas and small worms. The women in the most northern part of Baba Deli filter the well-water with cloth, but still, many inhabitants suffer from diarrhoea and stomach ache.

In the past, some of the wells were guarded against misuse (for example by children) by elders[30] living nearby. Nowadays, however, this community task has disappeared. With this, the level of insecurity regarding water has increased. The construction of new wells is a difficult process. Digging in the rocky underground is only possible using heavy machinery. One of the Mandara Mountains development organisations (PDRM[31]) or the Catholic Mission are willing to help, but only after a preliminary effort by the population itself. They have to start digging the first (easy) layers (with borrowed PDRM utensils) and gather a reasonable amount of money to invest in the work and building material needed. Up until now the social fabric or motivation of the neighbourhoods involved does not seem to be strong enough (see Social Insecurities).

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[30] In Dzambou Centre there was even a lock and set opening hours.

[31] *Projet du Développement Rurale des Monts Mandara*, the institute responsible for, among other things, the water supply in the Mandara Mountains which was partly financed by the European Union.

Educational insecurities

Both in the whole country and in the Far North province Kapsiki are considered to be one of the most backward groups as far as formal education is concerned[32]. In the whole village only 28 % of the household heads have ever received some form of education which sometimes means only a couple of months of the first years of school or some adult literacy courses. In Dzambou many young adult Kapsiki constantly mention this fact, while stressing the need for more and more accessible schools. North of the bigger rivers there is only one primary school, but this does not offer a full curriculum. Up until 2001 the rest of the village or the children that wanted to continue lessons up to the last primary school classes depended on the mission school in Sir. From the northern part of Baba Deli this means a two hour walk twice a day. What is more, in the rainy season the road is blocked by the rivers. Some of the parents in the northern Tndmou neighbourhood choose to send their children to primary school in Viti[33] , but doing so isolates them a bit from the rest of the villagers.

Sir also provides some secondary school education, but in order to prepare for the first official exams and diplomas (after three years) the children have to go to Mogodé, which is even further away and more expensive. To gain a real baccalaureate, pupils have to apply to schools in Mokolo or Bourah where they will have to board. Because this is expensive and unsafe for girls, most parents do not consider this as an option. Sending away adolescent boys means sending away a labour force despite household costs increasing.

Several of the men who attended school for less than 2 years now regret leaving school prematurely. In some cases it was even their own fault since their parents wanted to invest in their education, but they themselves did not want to go. They feel less secure in these modern times without any knowledge of French (the official language and thus the language by which to communicate with authorities or in court) and without the ability to read and write. "We do not know our rights. We do not know what the authorities are talking about, or what they want, so we cannot resist them. For example, now they have taken my lands! And without any reimbursement!"

There are various reasons why some members of the population did not send their children to school at all. In most cases it is because, when these children were young, schools had not yet been built in the region. Only a small proportion explains that they lacked money. However, this did influence schooling levels as in many families only the education of a part of the children could be paid. And more often than not, for those that did attend the payment of school fees stopped short after some years of education and they had to leave.

In general Kapsiki feel deprived of information. They complain that the only agricultural or health-related information they get comes from the extensionists of the Catholic Mission. This church demands strict Catholic lifestyles of their employees, so when one of them divorces or marries a second wife his contract with the Mission is ended. This not only diminishes his income and his own knowledge, but the amount of new information for his fellow inhabitants as well.

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[32] Iyébi-Mandjek (2000: 139) mentions a level of education of Mayo Tsanaga department of between 20 and 40 % in 1987. Attendance by girls is again the lowest of the Far North Province (2.8 % of pupils being girls as opposed to 6 % for the whole Province).

[33] Viti is a village to the north-west. From Tndmou it is reachable by way of a small bush road along the western boundary of the pasture reserve. From the main (north-south) road turning eastward one can reach it by a reasonably good road.

The Baba Deli neighbourhood in particular, that is even more isolated than the other Dzambou neighbourhoods, is almost never visited by workers of the several organisations that are trying to help develop the Mandara Mountains.

6.2.3 Economic insecurities

Cash crop

The Kapsiki plateau is a specific groundnut producing area. Indeed, men and women all produce at least some groundnuts, not only for personal use, but mostly for the market. Like the Bana further to the south (see Chapter 7), Kapsiki are the victims of a tremendously variable groundnut price. Over the years and over the months prices have ranged from 10,000 Fcfa to 20,000 Fcfa per bag of 100 kg. The farmers do not benefit from high world market prices. According to Pasquet and Fotso (2000: 92) the groundnut variant produced by Kapsiki is sold mainly in Douala and other southern towns for use as groundnut oil or in snacks. When individual Dzambou inhabitants try to sell in the south themselves, they are worse off because they do not know their way around and are easily swindled.

Some of the more water-retaining soils are very suitable for fruit trees and several families in fact possess tree gardens. However, most guavas, grapefruits and lemons are eaten by children because of the lack of an all-season road that connects the Dzambou region with the outside world. At best some off-take can be sold at the weekly market[34] in Sir. However, this market is very restricted and only serves a small region. In addition, the products have to be carried there by the farmers themselves or by donkeys. Potato cultivation is hampered for the same reason. To make it possible to sell potatoes from the Baba Deli or Tndmou neighbourhoods a long track through bush and fields has to be cleared of overgrowth every year. The same applies to onions, garlic and egg-plants, produced in small gardens around the house or along the river. It may add to household consumption diversification, but it does not help to improve the economic position.

Farm animals

In 2002, Dzambou accommodated 763.7 Tropical Livestock Units (TLU), excluding poultry and pigs. Although there are major differences between cattle and small stock as regards what they eat (graze or browse[35]), one can generalise by saying that this amount of TLU needs 916.4 ha, provided that all feed produced by the pasture lands is available throughout the year[36] and that it has a sufficient protein content. When counted using the calculation of Gaston (1996) the surface of grazing land needed is 3 ha/TLU (0.33 TLU/ha). That would mean a total requirement of 2,291 ha. The ha left for animal grazing in 1980 should have been enough (namely: 0.39 TLU/ha) in the first case but were not quite sufficient according to Gaston. However, now crop residues (stubbles and stalks) are added to the diet, I assume that there is enough surface area. Although, during the rainy season, the pasture zone is also visited by cattle from other villages in the region and perhaps from even further away, there are also cattle

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[34] For example, in December – January, when the fruits are ripe, a grapefruit on the Sir market costs 50 Fcfa, compared to double that price in Maroua, the provincial capital.

[35] Total edible forage production depends on the ratio between herbaceous and woody cover. On the other hand, the potential usable forage depends on what type of TLU use the area.

[36] The most optimistic calculation of Breman (1975) is a carrying capacity in the 1000 mm rain belt of 1.2 TLU/ha (see chapter 4.2.1).

owners from the village who herd their flock in one of the pasture areas outside the village to escape problems related to field damage. The increase in numbers during the rainy season may exceed Gaston's 0.33 TLU/ha that is the limit on a yearly basis, but not the 1.2 TLU/ha of the optimistic calculation. During the dry season, which is the main limiting period for cattle[37], the total number of TLU decreases even below the 0.33 TLU/ha due to some out-transhumance. This number can easily live off the remaining dry matter even when, as Boudet (1975: 2) stated, "approximately half of the biomass produced at the end of the growth period vanishes […] during the dry season" when preserved from grazing[38]. In short: there is no overstocking of the vegetation-for-fodder resources in this area[39], although the situation is not one of extreme abundance.

There is, however, a problem with water availability in the dry season. No artificial water-point has been constructed throughout the 'pasture' area of Baba Deli. When natural rivers run dry, herds have to depend on the one well that has been dug for animals in the middle of the hamlet, far away. The owners of small stock say it is impossible to walk so far with their animals each day.

Due to the combination of heat stress and a lack of water, which both also lead to decreased immunity against contagious diseases, the loss of small ruminants in the second half of the dry season is high. This adds up to diseases prevalent in the rainy season (see Table 6.2.11).

Table 6.2.11 *Percentage of respondents with animal losses over the last five years.* (Data on diseases prevalent among ruminants, donkeys, horses and poultry; theft of ruminants, donkeys, and poultry)

	Diseases dry season	Diseases rainy season	Diseases whole	Theft	Theft > 5 years ago
Baba Deli	33	39	70	54	20
Dzambou rest	52	34	86	50	11
Whole village	42	36	78	52	16

Another insecurity problem is formed by the high risk of livestock theft in the three isolated bush areas of Dzambou: the Baba Deli pasture, the bush dividing Baba Deli from Tchibi (adjacent to the pasture area and Baba Deli settlement) and the bush area just north of the Tndmou settlements (just south of the pasture area). Sometimes animals are even stolen from within the settled areas. Several households suffered from theft more than once. In a two month period at the end of 2001 at least five cases of theft of cattle, donkeys, goats or sheep were reported. Over the years almost everybody has suffered from this type of loss (see Table 6.2.11).

People who do have animals do not generally succeed in increasing their herds in a way that makes real trade possible. In order to trade cattle a high basic investment is necessary for each

[37] According to Breman (1975) and Boudet (1975).

[38] See (e.g. in Chapter 4.2) De Leeuw and Tothill (1990: 2) about the loss of biomass during the dry season. In the presence of grazers, however, the part over which this 'climatic' decline takes place is smaller because the animals have already eaten part of that biomass.

[39] According to Breman (1975: 6) to "avoid the risk of destroying the grassland beyond repair during relatively dry years", 0.7 TLU/ha is more realistic in the 1000 mm belt and this is still more than the amount in Dzambou.

animal[40] and most inhabitants do not have the means or are afraid of losing too much if their animals die or are stolen.

In fact, the percentage of people with cattle or with connections to cattle decreases. Several more fathers and grandfathers than current respondents were the owners of cattle.

Insecurities in non-agricultural activities

Off-farm activities

Given the low education level in the village, there are few off-farm possibilities in terms of paid jobs, whether with the government or other organisations. In the past some Dzambou youngsters used to go to Nigeria in search of jobs but the increasingly unsafe situation there means this is not an option either.

Kapsiki are not very used to labour migration, but some are realising that they should perhaps start considering this now. But, they do not know where to begin and are therefore in a disadvantaged position compared to other Far North ethnic groups.

Each village needs a butcher, a tailor, an undertaker. However, these are only job options for a very small number of inhabitants. The growing outside market, that seems to open up possibilities for outsiders and not for villagers, means that more and more cloth and meat is imported. Such a market should have provided opportunities for trade, but the larger market demands larger investments and villagers seem to lack the funds to make the initial step. Several of them complain about the stop on small credit possibilities. One generation ago, it was still possible to borrow government money in Mogodé without having to provide real collateral. However, those who counted on this option are these days very disappointed. Animal banking and trade is also insecure due to the various diseases and thefts that affect the region.

On-farm activities

Several farmers and their wives are active in the production of household utensils from raw materials that are available in the direct vicinity. However, the products are mostly for own use because, once again, transport to regional markets is almost impossible. Even when people make the effort to construct traditional products and transport them to the market, they are outnumbered by cheap plastic products from Nigeria that are imported on a bigger scale each year.

Wives can earn with *bilbil* (local sorghum beer) production or bean-flour fritters, sold at household gatherings or the local markets. However, the increasingly popular Islamic faith and the Lutheran church forbid the drinking of alcohol.

In short, modern economic possibilities are not very abundant, while traditional sales are, at the same time, diminishing.

6.2.4 Social insecurities

Family and group insecurities

Within the Kapsiki culture the extended family in both the patrilineal as well as matrilineal line

[40] A year-old calf costs 60,000 – 80,000 Fcfa. Fully grown cattle can fetch a price of 150,000 with big bulls sometimes costing 300,000 Fcfa.

is important. As we have seen, the patrilineage offers access to fields and other economic inheritance. However, for care and social security one has to rely on the matrilineal family members[41]. In particular, brothers and sisters of the same mother have a strong bond. At the same time the level of insecurity is high for those children that lose their mother at a young age. When they are still very young, they are claimed by their maternal family. Indeed, they have to live with a maternal grandmother or mother's brother, because co-wives do not often take care of their husband's other off-spring. Such children can only stay within the household if the father's mother lives in the same house.

However, this phenomenon does not increase insecurities because all Kapsiki are used to it. If a wife temporarily (or permanently) leaves her husband's compound, her children have to be looked after by the husband himself. Especially when there was only one wife in the compound, this puts a burden on the man's (and household's) security, because he cannot take care of his children, cook the meals and cultivate at the same time. The increase of Christianity with its one wife policy is adding to the difficulties.

In the past, village chiefs could oblige women to return to households with very young kids to enhance survival chances, but nowadays even the *lamido* does not want to interfere in such domestic problems. Several complaints submitted at district court level (= *lamido's* court) by fathers who have been left by their wives are deliberated on year after year without any solution being found for the stricken household. Sometimes the father's mother lives in the same compound and she will then look after motherless children, but this is only possible for one (the oldest) son.

With the increased expectations of modernity, expectations between family members, and especially between family in law, have risen to a level that can only lead to disappointments. Postponed bride price payments for the sake of giving the young couple the opportunity to acquire some wealth[42] only lead to quarrels because the expected wealth does not arrive and the groom cannot pay his father-in-law later on. Sometimes the discords even result in physical aggression between spouses and sometimes between brothers and brothers-in-law. Naturally, the bonds between the families deteriorate.

Political insecurities

With the increase in democratisation, people feel they should have more influence over their lives. In the past they were forgotten by the authorities, but now they believe they can choose a party which knows about their existence and which is able to implement change. Unfortunately, this has turned out not to be true. Because they were not satisfied with what the incumbent mayor had done for them and with the things the ruling party in general had done for the region, they tried to elect another mayor in the community and another party in parliament. As far as electing a new mayor was concerned they succeeded although, as they say, it remains to be seen whether he will do more for the village or more for himself. Most respondents say that they have not seen any positive changes in the six months since he has been in office.

At country level President Biya and high-level party members made their own decision.

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[41] In case of the beating up of a wife by her husband, neighbouring half-brothers of 'only' the same father will not interfere, as I had the misfortune to experience during my stay in the village in January 2004.

[42] This habit seems to increase, and so does the number of quarrels.

Although a substantial part of the Kapsiki chose a representative of the non-governing party, the UNDP[43], this man has not become member of the new parliament. In fact, the number of RDPC seats in parliament has increased to more than 82 % and the UNDP is only represented by one seat. The elections in the Kapsiki sub-department were labelled fraudulent. The result is that the sub-department is not represented at all. Now the Dzambou inhabitants have not only been forgotten, they do not even have a voice.

Conflict mediation

In Dzambou, as regards problems concerning private matters such as profound quarrels between spouses, when two grown-up brothers have been engaged in a fight, or when a farmer suspects his neighbour of stealing from his granary, the village or neighbourhood chief has to act as arbiter. When necessary he is assisted by wise men.

In addition, in the case of discords between two village inhabitants about the ownership of a piece of land, parties go to the village chief with their witnesses and explain their claims. Apart from hearing the story of the complainers and the testimony of the witnesses, the chief consults with his counsellors and other wise men to establish the history of the piece of land involved. The increase in bribing means the reliability of witnesses has decreased. If the accused or complainant does not pay enough to his witness (or did not pay enough in the time of the transaction) this witness will not back him up. In other cases threats are issued to witnesses to prevent them from testifying or to make them testify in favour of the person who threats. Women seem not to have any significant role as a witness, although they can explain their point of view. When they are themselves parties in a case they have to rely on the testimonies of male relatives. Thus, money and social contacts influence someone's position in a case. But money is gaining in importance and with that the position of poor people is becoming less secure.

Even the village chief himself can be a witness (for example in a land transaction that is contested later on by the offspring of the seller). He will not act differently from his subjects if he thinks the (previously) received witness fee is insufficient[44]. In such a case the parties will try to resolve the problem between them or they will decide to appeal to people "higher up". The village chief (or even the neighbourhood chief) is also the first to be consulted in the case of criminal offences (theft or personal violence). He will decide whether or not he is entitled to handle the problem himself or should inform the higher level authorities. In the event of crop damage by animals belonging to the village chief and his family, the injured party is powerless. Of course, the village chief then handles the problem himself and decides in favour of the animal owner[45].

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[43] *Union Nationale pour la Démocratie et le Progrès.*

[44] This happened in a conflict over land, situated on the territory of Sir. The land was sold a couple of years ago by a woman living in Mokolo to *lawan* Yaya of Baba Deli in the presence of, among others, the high chief of Sir. Yaya had an ownership paper but that appeared to be useless. The woman wanted to have her land back because she wanted to sell it to a friend of her own family in Sir. She tried first to say that Yaya did not pay the real price and then arranged for relatives (men) to claim that she could not have sold it, being a woman, and finally she asked the Sir chief to be her witness. This man, being fully aware of the sum paid and the fact that that sum was given in accordance with the asking price, gave testimony in favour of the woman. One of the reasons could be that the land was now back in the hands of an inhabitant of Sir. However, the chief admitted freely that he did not want to back Yaya because he had given him nothing for being a witness when the deal was made.

[45] In 2000, this happened to the neighbour of the Dzambou village chief when she saw the pigs of the chief's wife enter her fields. Even asking to guard them did not help.

The first person of a higher rank who people can appeal to is the traditional district chief - the *lamido* - the highest placed 'non-official' administrator. He will handle the problem in the same way as the village chief, although with more authority (and will accept a 'salary'). For more official prosecutions or settlements by judges people can appeal to the sub-department chief who will ask for official reports from the police (the 'gendarmerie'). If the sub-department chief cannot solve the problem, the parties can go to court and thereafter, to the court of appeal if necessary. Authorities themselves can charge subjects with criminal behaviour, in which case the police will interrogate them and draw up an official report. Again, this report can serve as testimony before the judge of the criminal court.

As regards combating banditry, the central government set up a semi-military anti-gang (see Chapter 4). This organisation has been accused by human rights watchers of arbitrary executions and arrests. Moreover, several people in Dzambou have told stories about arbitrarily arrested brothers or sons. People complained about an increase in personal insecurity because of the anti-gang rather than a reduction thereof. "Animal thefts have not diminished. It is still very dangerous in the bush and now you even have the risk of being arrested by those anti-gang bandits."

In the case of crop damage by livestock, the best route is (apart from settling it between the involved parties themselves) to report to the agriculture line officer in Sir or Mogodé, who sends somebody to assess the damage and calls together the special committee responsible for this type of problem (see Chapter 4). The animal husbandry line officer, the police chief and the agriculture line officer sit on the committee and the sub-department chief acts as its president. The committee consults the official lists to establish the compensation that corresponds to the damage done, and considers special circumstances for the case at hand that may give rise to a deviation from the standard reimbursement. However, this route entails a high risk of losing more money than you gain because of the corruption of the parties involved.

All cases at a level higher than village level have to be paid for by the plaintiff and the accused. That means that, as was the custom, people pay a fixed sum to the *lamido* for his generous intervention. At present, this payment is higher, more arbitrary and more influential on the outcome than in the past. Farmers say, "If you have cattle, you can always pay enough to make the *lamido* choose your side." In addition, the judging authority keeps a portion of the settled (reimbursement) fee. Thus, asserting your rights is an expensive practice. However, it can be used strategically to ruin your adversary.

Another problem may arise when land ownership is not contested between co-villagers, but with the State. In other words, when the State wants a piece of land that, in the perception of the users, is their property. Because, according to law, all land is State land as long as it is not registered otherwise, and because there are not many cultivators that have registered their properties (registration was (and is) an extremely difficult undertaking[46]), the chance of winning such a case is small.

Land allocation and insecurities

According to customary law, once land has been cleared it remains the property of the family of the first cultivator, even if this farmer did not actually grow any crops on the field in question. In reality Kapsiki established the habit of lending out land for free to whoever needed or

[46] See Fisiy (1992), Goheen (1989a) and Van den Berg (1997).

wanted it (Van Beek 1978). When the French colonial power arrived, the plateaux became safer and the first clearers built houses there for their families. Also new settlers arrived from the same region of origin, called Sir (see Figure 6.3).

According to their system, access to fields should be easy and their use cheap. However, growing population numbers and increasing distances between lines of off-spring that live far from each other, cause customs to harden. More and more people ask for money for fields that were lent out in the past, or try to sell them for high prices. Some families are even chased from their compounds, where they have lived for generations, because the owner of the land decided to sell (whether he lived nearby, in the same village or even far away). On the other hand, many farmers that now live in Dzambou have lost the fields of their ancestors in Sir. They complain that they have no place to go "when, for example, locusts arrive in the village"[47]

Conflicts over field-boundaries or field-ownership are becoming increasingly common. Even the testimony of former witnesses cannot be trusted anymore. It seems as if the traditional territorial rules are changing into "might is right". However, what this might is based on, or what it consists of is unclear, even to the Dzambou people.

Cultural insecurities

Social insecurities based in the cultural domain can be seen when people are no longer able to rely on the rules, norms and values prescribed by religion, beliefs and other traditional systems that cover this realm. As long as no shared, new systems have replaced the old ones, and specifically when the different new ones clash with each other and with the old ones, bonds and linkages become vague and perhaps even develop into something which is the reverse.

With the increase of new religions (Christianity and Islam), bonds offered by the traditional religion disappear. In 2002, the majority of Dzambou still belonged to the traditional religion (61 %), but 23 % were Christian[48] and 14 % Muslim. Kapsiki encountered the same breakdown of traditional binding ceremonies as the Bana of Oudda (see Chapter 7). Here again the Protestant church as well as Islam prohibits the use of alcohol that plays a role in the seasonal festivities[49]. Instead of a shared ceremony of all villagers to celebrate the beginning of the growing season, Muslims give priority to their Ramadan and sheep festival and Christians to Christmas and Easter. In this way, a divide is created within the community.

The new religions can be the source of heavy controversies, leading to fights and casualties, as can be seen in neighbouring Nigeria. New bonds within new groups can lead to the breakdown of bonds and linkages between the groups. In such instances the social cohesion of the total village and even of the whole Kapsiki community (of Mogodé) may disappear. Indeed, the religious leaders that each form their congregation in Dzambou come from outside the village. They seem to have no intention to hold the Kapsiki together. On the other hand, they are not busy trying to turn the villagers of their own religious persuasion against those of the other religions. They preach a life of tolerance and peace. This is only logical given that

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[47] Interviews with seven different household heads in Dzambou Centre, Tndmou and Baba Deli, October 2001 – January 2003.

[48] 15 % of the population was Catholic and 9 % Protestant, divided into 6 % Adventists (who mostly live in their own settlement adjacent to that of Baba Deli Fulbe) and 3 % Lutheran Brethrens.

[49] See Van Beek 1978, 1981, 1987.

Kapsiki themselves are very tolerant and say that people should believe what they want and make such statements as “In fact we all believe in one and the same god”.

Thus, in general, it seems as if social insecurities are only slightly bigger than in the past. However, they are increasing. Major violent outbreaks against neighbouring villages may be less common than two generations ago but the number of smaller internal discords is growing. Wise old men fear for the breakdown of the social fabric of the village, because of a lack of a common enemy. Fair conflict resolution is becoming rare. In addition, the links with higher level institutions with a view to enhancing development in general is becoming a real problem.

6.3 Investments: going to Box 2

As is depicted in the “insecurity complex” in Chapter 3, when people experience insecurities in a mutually influencing complex of domains, they search for strategies to overcome these. In the “VoE diagram” it is during the step from Box 1 to Box 2 that actors perceive the different possibilities (Figure 6.2). To understand the step to Box 2 of the VoE diagram the diversity of options that lead to certain strategies and the choice for specific options have to be explored. With a variety of capitals at hand (see Chapter 2) the different Kapsiki invest in the social relationships, economic goods, personal capabilities or environmental circumstances they meet to improve their future and that of their kids. Sometimes persons do not really invest in something, but just ‘muddle through’, perhaps only hoping that their positions will improve in the future. The investments are shaped by the combined effect of each of the four categories of the Actor-in-Context model, as formulated by De Groot and Kamminga (1995; See Chapter 2): implementability of options, objectified motivations, interpretations and the autonomy towards implementation per actor. I will describe the factors that influence these options and make people chose ‘escape routes’ (downward arrows from the central part of the “VoE diagram”, see Figure 6.2) or make them follow the way to the invasion of a new niche.

6.3.1 Environmental investments

Investments in the quality of land

Dependent on the basic fertility of the soil, the owner (or user) has to maintain or improve this soil. To improve the quality of land, and via that the agricultural production, a natural fertilisation process, the adding of fertilisers, extra labour input or more technological equipment can be used. The natural fertilisation process means leaving the field fallow for as long as it takes to build up fertility levels again. Added fertilisers can be natural or chemical. The latter can be bought at the market, from agricultural extension organisations or via friends. Natural fertilisers consist of animal dung, household waste, leaves or stems from harvest left-overs, or several types of ‘wild’ organic matter, like leaves of trees.

Table 6.3.1 shows details on different uses of fertility ameliorating techniques. The most important in Dzambou is the use of fallow rotation. In these hills and plateaux the cycle can be very long. Mostly, fields around houses are used for longer and are left fallow for shorter periods. This is (partly) possible because of the use of household waste and it is done for convenience. Most actors reported that they use a field further away for three to five years and that

the fallow period should last at least ten years. But this is not always possible. Everything depends on the basic fertility of the location and the possibility for maintaining it with animal dung (the only option in the past for actively improving fertility) and, of course, of the other surface area available. Two of the three bush areas (that of Baba Deli and the smaller one in the direction of Tchibi) have not been used for over thirty years, as can be seen by the height of the trees.

Because Kapsiki are used to mixed cropping (mostly even three crops: cereals, beans and groundnuts), the leguminous beans can increase the fertility of the fields slightly which makes it possible for the grains to grow better. It is doubtful whether this is a deliberate choice, but the effect is the same. When the leaves of both groundnuts and beans are left on the field this increases the fertility even further.

As far as Kapsiki are concerned it is difficult to use chemical fertilisers because these are not sold in the village. Those farmers that have money to purchase them (13.9 % of respondents) depend on the occasional arrival of a truck from some chemical company or other at the regional market in Sir. However, they complained that the supplies always arrive too late in the season. The effect on the field is then far smaller than it could be.

Table 6.3.1 *Fertility improving measures* (in numbers and % of respondents. n= 180. Some actors use several measures at the same time)

	Fallow rotation	Animal manure (own animals)	Animal manure (other's animals)	House-hold waste	Natural fert. (non-animals)	Chem. fert.	Nothing
Numbers of respondents	70	84	28	74	8	25	18
Percentage of respondents	38.9	46.7	15.6	41.1	4.4	13.9	10

Other ways of improving the fields is to use measures to curb surface run-off, measures to combat flooding when necessary (see Table 6.3.2) and measures to protect against pest infestation. Examples are: *Striga hermonthica* that attack millet roots[50] or potato bacterial diseases and nematodes. Farmers can use crop rotation to combat the latter. When potato seeds are bought they are mostly treated with chemical bactericides. But when farmers produce their own seeds, by cultivating the crop twice a year (the second time during the dry season with the help of irrigation), seeds and soils can become heavily infected and agronomists recommend the use of pesticides. In the whole village, only two or three farmers try to produce a commercial amount of potatoes[51]. Then they also try to lay their hands on appropriate pesticides.

[50] In Dzambou a large number of fields are infested with Striga plants. According to Raemaekers (2001: 54) "Striga seeds can remain viable in the soil for as long as 20 years", they "germinate in response to a stimulant produced by the host roots" and "Low soil fertility and low rainfall favour Striga infestation". Thus, after long fallow periods the parasite may still be present. Possible ways of controlling the parasite are to increase the soil fertility or to pull out the plants by hand as soon as they become visible.

[51] Potato is a relatively new crop for the region and in 2000 nobody produced enough to sell on a large scale. In 2001, only one farmer in Baba Deli neighbourhood produced 40 bags (20 kg) while in 2002 two farmers had sown a substantial surface area and hoped to sell more than 30 bags each after harvest.

Table 6.3.2 Other field improving measures.

	Terraces	Stone ridges	Ridges of stems	Small canals[a]	Nothing, although necessary[b]	Nothing (not necessary)
Numbers of respondents	126	15	3	3	13	24
Percentage of respond.	70	8.3	1.7	1.7	7.2	13.3

[a] = These canals ensure the quicker run-off of water in cases where there is a risk of pool-formation on the fields
[b] = The necessity of measures is mentioned by the respondents themselves

The terraces built by Kapsiki living on the mountain plateau cannot be compared with the highly developed terraces of the Mafa and Mada (for example) in the steep mountains further north[52]. On the plateau the terraces are lower, at best (depending on the sloop[53]) half a metre, and even that is very rare. The majority of terraces are not higher than 10 to 20 centimetres. Most of the time they are constructed by piling stones to form the wall, with a little bit of earth between them to make them stick together. The bank (the horizontal part used as field) is mostly left to form in the course of time: the run-off carries earth-particles that are blocked by the wall, and fill up the angle between the slope and the wall. The general aspect of the banks is not, as within Mafa territory, horizontal or even inclined towards the slope. Although less steep, it still follows the course of the slope. In short, most 'terraces', as they are called by the respondents, look like glorified stone ridges. The lack of proper building techniques and maintenance is partly due to the fact that terrace building is relearned by the current generation after the former one has neglected this traditional method of soil conservation. Knowledge is therefore not transferred effectively. Now the extension workers and their local assistants are reintroducing the techniques.

Doing nothing to combat run-off, even when this is regarded as necessary, may be due to a lack of stones in the field to build the terraces or the ridges, an inability to perform the job personally and (or) a lack of money to get others to do the work for you. Building terraces and laying out stone rows is a man's job. Of all the respondents, only three have paid labourers to construct terraces[54]. This is a type of investment that will be recouped in the long run.

Investments of quantity of land

Not only field quality, but also field quantity is increased by terrace building. Sometimes, an area that was unsuitable before can be used after terracing. Even dividing a used slope into horizontal plots increases the quantity.

[52] For the use of different soil and water conserving techniques in the northern (steep) Mandara Mountains see, for example, Van Andel (1998); Zuiderwijk (1998) and Ndoum Mbeyo'o (2001).

[53] The slope also defines the number of terraces necessary. On hillsides, the number of walls can increase to one for every 5 metres. On average no more than one terrace wall is built every 200 metres because on the flat plain-like parts of the village no terraces are built at all. The length of each terrace wall depends on the width of the fields.

[54] The wages for labourers to construct terraces depend on the number and height of the 'walls' to be made. For example, one older farmer paid 8,000 Fcfa (in 1999) to some labourers to construct two 20 cm high terrace walls of approximately 30 m length. Another paid 60,000 Fcfa to labourers who constructed three 50 cm high terrace walls of 10 m length in 1998

In the past, land quantity was increased by borrowing land, but this habit is disappearing. Many residents acknowledge the reduction in the available lands due to the growing population. But the family planning program of the State has not (yet) reached the area. Almost nobody does anything to decrease the number of children born.

Investment activities to improve land surface security can be separated into two main classes. Those with many family fields activate their ownership claims. Fields that they did not use, but were used by other villagers (sometimes without asking or even without knowledge of the owning family) are claimed. This means that users are evicted or forced to pay rent. The latter can still be a symbolic amount of money or a non-monetary act to demonstrate who the owner is.

On the other hand, actors decide to buy fields to safeguard the position of their off-spring. At the moment, 28 % of respondents have already bought fields. However, many potential buyers first have to save money. Their investment strategy is therefore to perform other activities in order to acquire capital. Up until now, nobody has considered looking for credit to facilitate land purchases.

As yet, land prices are not fixed. According to respondents there are some criteria, such as proximity, the general position of the field, fertility and measure. However, on the whole, prices are established between seller and buyer in a quite arbitrary manner (see Table 6.3.3). As has been said before, a real land market does not exist (yet). Although Table 6.3.3 does not show a difference in prices for different types of fields, compound fields are regarded as having a greater value. Nevertheless, there are users who do not want to pay the requested (high) price. Up until now they can take the risk of refusing because they can continue living at the location during the negotiations (which can last for years). The feeling that prices are rising rapidly (which has also not been demonstrated to be a fact in the table) makes people eager to buy now.

Table 6.3.3 *Land prices (in Fcfa x 10^3 /ha) over the years* (based on personal information of interviewees, October 2002 – February 2003).

	1960-1980	1981-1991	1992-1993	1994-1995	1996-1997	1998-1999	2000-2002
Mean land price	75	52	83	62	85	82	73
range	50 -100	35 - 80	50 - 110	17 - 128	50 -128	30 - 240	31 -133
Price of compound-field (mean)	No data	35	95	62.5	109.5	83	91
Number of sold fields	2	4	6	15	5	16	17

One can say that the real price is decreased because the prices stayed more or less the same despite the value of the Fcfa decreasing enormously[55, 56]!

To circumvent future problems with regard to the proof of ownership, and based on rumours

[55] From before independence, the Fcfa was always linked to the French Franc. The economic crisis meant a considerable rise in inflation and in 1994 the Fcfa was devaluated by 50%. In 2002, 1,000 Fcfa was worth 1.5 Euro.

[56] Indeed, one respondent declared that he knows of a land sale 40 years ago of 2 ha for the price of a car!

[57] Adult education tries to teach people their rights and obligations. One of these is the right to land and the fact that the registration of land is a necessity.

about the necessity of registration of land[57], sales are more often carried out now on the basis of the production of transaction and ownership papers[58].

6.3.2 Human domain investments

Health investments

In the more isolated parts of the village, like the Baba Deli neighbourhood, the importance of preventive health care is acknowledged. Groups are formed to build a hut to serve as a surgery for visiting nurses and to spread information about both the hours of such visits and about new home health measures. Some village residents take on the task of lecturing about the necessity of vaccinations and of helping vaccination teams to reach all children in the village. Sometimes this work is connected to outside projects organised by the church or a foreign NGO that has engaged the help of villagers. In those cases the 'informers' will probably have more information at their disposal and may sometimes even have learned useful methods of communications.

In addition, several neighbourhoods try to collect money and to engender a 'willingness to dig' more water wells. In the beginning of 2002, the village chief, together with representatives of each neighbourhood, visited each compound personally to explain the authorities' intention to construct an artificial water well and to ask for financial support from his subjects to ensure the authorities indeed implemented the plan.

Educational investments

Today's parents are more motivated to send their children to school than in the past. The number of parents who send their children to school has more than doubled. These days, it is even considered a good investment to send daughters to school. Only five fathers out of a total of 180 do not want to invest in their daughters. But others mention the possibilities offered by highly educated girls who bring home rich husbands and accompanying goods[59]. Of the 43 % of the population that does not send their children, the most important reason is that they are going to send them in the future when the children are old enough, if there is still enough money to do so. Parents dream of high-up administrative for their children, or even that they will one day become governor[60] or presidential assistant. On the other hand, general knowledge of French and the juridical system are considered to be a good return on educational investments. More information, for example about land rights and ownership papers, about identity card fees or taxation levels, makes them more secure against authorities and fraudulent civil servants, the respondents say.

The most obvious reason for the former generation to keep the children at home, namely that they are needed there to fetch water or herd the goats, is only mentioned by four current fathers among all the 180 respondents. This is a real sign that schools are deemed very important, at least for the boys. Several girls are considered (more by their mothers than their fathers)

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[58] Most, if not all, of these papers have no formal legal status because the law prescribes special procedures and signatures of specific officials. Even those papers that have been signed by the mayor or his representative do not fulfil these prescriptions, despite the fact that the new owners have paid for them (15,000 Fcfa for example). The papers are, however, useful at local level and reduce people's dependency on witnesses.

[59] "Then she can come by car and take me for a ride and even give me some extras from Maroua", one of the proud fathers said, or: "When she has a good job, she will not bother to have children too young and then she can save a bit and look after her old father," said another.

[60] Highest administrative post at provincial level.

to be needed at home during the labour intensive rainy season and post rainy season harvest period. However, these same mothers or grandmothers are willing to pay for lessons for them in the dry season. At the adult education lessons and the literacy courses they meet several of those grown up men and women that regret their former truancy or lack of possibilities and are now trying to make up for the loss.

To give the current generation more options, the population in Dzambou Centre started a primary school during the course of 2000. They paid one of their inhabitants, with some secondary education experience himself, to act as a teacher and they borrowed the small chapel of the Catholic Church in which to give the lessons. To the satisfaction of the Dzambou Centre inhabitants, the new mayor invested community money to ensure that the teacher received regular salary payments[61]. Subsequently, the male population started debating how to construct a real school building. They invested time and money in discussions of the site, the levelling of the ground, the manufacture of the bricks and the inviting of experts from neighbouring villages who had gone through the whole process before and who could help with advice. As far as the other Dzambou neighbourhoods were concerned, the community investment was a sign of an unequal distribution of resources. They are not really against it, but they underlined the increased necessity of also investing in some other schools[62].

The whole process of social action to obtain a school has taken many years. It shows that the village has enough social fabric to carry out collective action, but it was (and is) a difficult road, paved with many quarrels[63].

6.3.3 Economic investments

Cash crop investments

The two most important cash crops as far as Kapsiki are concerned are groundnuts and beans. Beans are a century-old crop that originates in Africa itself. People are therefore used to producing it although, until recently, it was mainly used for consumption purposes. Groundnuts were introduced by the colonial powers. This crop served to bring the Mountain plateau inhabitants into the cash economy. From the 1920s onwards more and more Kapsiki became dedicated to the production of groundnuts as a cash crop. Thus, in 2002 - although every household still used beans in the vegetable sauce that goes with sorghum paste, and groundnuts in other dishes[64]- the bulk of these two crops was produced for the market.

Some villagers buy up small amounts from different farmers and bring the collected bags to the regional market in Sir. Regional traders – one of them living in Oudava; locally well-known as a rich man - drive here in trucks built to pass the rocky, difficult road from Mogodé.

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[61] This is a strategy often applied in order to convince the State authorities of the necessity of and eagerness of the population for a school. Sometimes it works and the school expenses are (officially) paid for by the State.

[62] In the beginning of the school year 2003-2004, the Catholic primary school in Baba Deli (three years course) indeed changed into a public school. However, this did not lead to an improvement: the lack of school equipment is still as acute and the teacher's salary, which was paid punctually each month by the Catholic Church until June 2003 , has not even been paid once since (in January 2004). Equally, the Dzambou Centre teacher was not paid his salary either now that school is no longer a community matter but also a State matter.

[63] Comparing the final result with the deep-down autonomy of Kapsiki households as described by Van Beek (1978; 1987), one can say that the social capital towards collective action has grown.

[64] Groundnut paste is seen as indispensable for a good '*ngari*', the sweet flour (and rice, if available) drink. It is a nourishing drinkable meal consumed particularly as the first meal on Christmas morning or of the evening during Ramadan and given to hungry travellers and visitors to market 'cafés' or people's homes.

They buy a load of groundnuts to be sold in Douala. Some of the groundnuts are exported to Nigeria and some to other areas of the world, although most of the crop is intended for the Cameroonian market itself. Nevertheless, the price is influenced by that on the world-market and this can differ tremendously. The risk, however, is taken by the bigger traders, not by the villagers themselves. They have fewer investments, earn less but are more secure.

Beans can also be transported as far as Douala, albeit in smaller quantities (approximately one-third of the groundnut quantity). The majority of beans are sold in Maroua. Because more and more Islamic people use beans in their daily dishes, the internal market is also growing.

Women produce Bambara groundnuts. Mostly they do so mixed with other crops or in a small corner that would otherwise not be used. They use them to feed the children between meals and to sell. Most of the time husbands are not aware of the amounts produced. Sometimes they may have helped out a bit and have at least some knowledge, but Bambara groundnut production is really a woman's domain.

Fruit production is a good option because the area along riverbeds and on more humid slopes is suitable for the cultivation of fruit trees. Several families have so-called tree gardens where their ancestors planted mango, guava, grapefruit and lemon trees. People who own compound fields often plant trees, like papaya, around their houses. In spite of the fact that transport to the bigger markets is difficult and the villagers depend on regional markets only for sales, more then 20 % of young men[65] explain that they would like to have more trees. Everybody is expecting there to be better roads in the future. Then fruit could be sold in Maroua or even further away. Until then only handfuls of grapefruits and guavas reach the Sir market or the different village and neighbourhood markets and the income generated only serves to buy salt or sugar for household consumption, or pens and notebooks for schoolchildren. The rest of the fruit enhances the vitamin uptake of the village children.

For several years the production of potatoes and soybeans has been on the increase. However, production is still in a kind of experimental phase and transportation presents the same problems as for all other products. Nevertheless, some farmers with suitable fields do think these crops are good alternatives. Diversification means the risks are spread. Those who produced soybeans over the last two or three years[66] are happy with the price and with the easiness of production.

In the Fulbe settlement of Baba Deli one of the young men is trying to generate an additional income from potatoes and he is investing heavily in order to make transport to bigger markets possible. Every year after the harvest, he clears the herbs and bushes of the small rural road from his hamlet to the main road by hand using a machete! By doing so he opens the 10 km long track for a small truck that is then able to reach his stock[67]. Although it costs him a lot of energy (and thus the need for more consumable calories) it does not interfere with labour demand elsewhere.

As far as he and other villagers are concerned, it is worthwhile asking repeatedly for a governmental investment in an all-weather road. However, nobody knows what else to do than to

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[65] I did not encounter any woman with property rights to fruit trees.

[66] Although the Agricultural Service data only gives production figures for 2002, in earlier years some people did produce soybeans, but at too low a level to be officially recorded.

[67] I was very grateful for his effort because it enabled me to reach the Fulbe quarter by car: very convenient when one has to stay there for more than six weeks.

ask the village chief to ask the regional or sub-departmental chief, or perhaps the mayor. This is the price that has to be paid for the poor connections between village and those at higher levels.'

Farm animals

Like in the rest of Sub-Saharan Africa animals are used as a banking system. People start by buying chicken, collect enough to buy a sheep or goat and later on purchase cattle if at all possible. This can partly be seen as an economic investment. The invested money can be returned with interest when the animals procreate. However, the real animal husbandry for profit is only carried out by a small number of village inhabitants. Although Kapsiki are known as the breeders of a special breed of cattle (*Bos taurus*, Kapsiki race[68]) and they were used to cattle, it was more often than not the case that they owned cattle purely to maintain their cultural system of having a bull fattened in the house in order to be slaughtered on specific 'holy' occasions (see Van Beek 1978). This was no animal husbandry aimed at amassing a herd in order to live on the meat and milk or to sell the surplus to become rich.

Today, of all respondents (n = 180), only 49 have cattle (26 in Baba Deli (30%) and 23 in the rest of Dzambou (24 %) and the mean number of cattle per owner is 18 (22 for Baba Deli, range 1 – 175 and 14, range 2 – 50, for the rest of Dzambou). Several different activities connected to farm animals are carried out as can be seen in Table 6.3.4. Most of the people that herd their own cattle (or have their children do the job) keep their cattle in the vicinity of their compounds, or at least in the settlement area of their compound. For example, Tndmou cattle owners take their herd no further than the Tndmou bush area just south of the Baba Deli pasture.

Table 6.3.4 *Cattle related activities of household heads* (n = 180)

	Own child herder[a]	In herd other pers.	Use paid herders	Herding own cattle		Herding patron's cattle			Trade in cattle[b]	
				With crops as major income	With crops as additional income	With crops as major income.	With crops as additional income	Herd own cattle as well[d]	With crops as major income	With crops as as additional income
Cattle owners (n= 49)	4	11[c]	9	12	7	1	6	5	3	0
Non-cattle owners	n.a.	n.a.	n.a.	n.a.	n.a.	4	0	n.a	1	0

[a] = In two instances the children herd the cattle in turn with their father
[b] = This mean the structural buying and selling of cattle, not the incidental sale of cattle because of crisis
[c] = On eight occasions this 'other' is a brother and on one occasion a son
[d] = These people are also included in column 5 and 6
NB The first three columns describe cattle owners that cultivate crops as their main income-generating activity.

[68] For an overview of categorisation and history of introduction of the Kapsiki sub-type of the Savanna shorthorn *Bos taurus*, see Rege *et al* (1994).

There are several livestock traders in the village, but only a few of them buy and sell substantial numbers. Some of them combine their animal trade with being a butcher at local markets, buying animals to be slaughtered soon afterwards.

To counter the insecurity of theft in the extended bush areas, people herd their cattle on the fallow surface between the fields. Now small flocks are guarded more than in the past and always in the vicinity of the houses. Zero grazing even takes place from time to time, especially during the rainy season and directly thereafter, when the risk of crop damage is substantial. Good products that can be used as fodder are the leaves and stems of beans and groundnuts.

At least five respondents had invested time and effort in the herding of someone's cattle when they were younger. However, only some of them had actually earned enough (or did not lose their calves again) to pay for wives or to build up a (small) herd.

Non-agricultural options

Off-farm activities

Some of the Dzambou men try to earn an additional income from small-scale trade. Products like sugar, salt, matches, soap and batteries are always in demand in the villages. They buy their merchandise in Mogodé, then travel from one local market to the other with just a box at the back of a bicycle and sell at slightly higher prices than they paid themselves. Profit is low per transaction, but especially in the dry season it is almost the only way to earn something.

There are some individuals who can increase their income by being a butcher (buying a goat or sheep and slaughtering it at a local market), a tailor (also possible for women), or such incidental professions as photographer or assistant to an official. The latter profession is an honourable but, with regard to income, highly insecure activity that may take up a lot of time. For example, the forest guardian, who is assistant to the head of the sub-departmental "Forest and Environment" bureau, has never been paid.

During my field visit I did not encounter people who engaged in migration labour. Some sons leave temporarily during their adolescence, but they return when it is time to marry. From then on they stay in the village. Some go as far away as Douala to seek their fortune while others choose Lagdo where they, for example, work as fish carriers at the lake's shores. Most of them go to Garoua to see something of the world. There they work as street vendors, become guardians for richer Cameroonians and some of them even end up as robbers. The money they earn comes in handy to pay for a bride price or household utensils. One returned adventurer had bought a generator and a television and now he is able to watch programmes if all goes well and he continues to have enough money to buy petrol[69].

There are (young) men who structurally do off-farm labour for others, but within the village or at best in Sir or Mogodé. 5.5 % of the inhabitants earn an additional income from herding the cattle of rich villagers or owners from, for example, Mogodé. Some of those herders look after their own cattle at the same time. Boys can start looking after cattle at a very young age as a way of learning the job. However, most owners with more cattle, and specifically when such an owner lives further away, want a more trustworthy and responsible herder. Looking after a herd day and night, taking the animals into isolated places to look for grazing

[69] He complains, though, about the lack of possibilities in the village to gain money. "I could build up for the future when I was in Garoua, now I become poorer every year", he says.

and avoiding crop damage, protecting them from theft, diseases, and thirst is a heavy task. But it is well paid: every five months the herder earns a grown calf. All the herder's expenses while performing the work, including meals, have to be paid by the herd owner, while he also pays for medicines, salt licks and other things the cattle need.

An unusual way of earning money is by performing for tourists. The Mogodé area, with its typical rock formations and inselbergs, attracts several hundreds of tourists per year. They are interested in the Kapsiki traditions, like the 'crab reading' that is used to prophecy or find remedies in the case of illnesses. In addition, Kapsiki are famous for their dances. So several young men can and do form a group and hire themselves out to dance for tourists[70].

On-farm activities

When overall production is sufficient, women have enough millet and bean yield to use for *bil-bil* production and the preparation of fritters. Thanks to there being a market in each neighbourhood every week and thanks to the possibility to visit markets in neighbourhoods close by, women still have the possibility to earn some money. Sometimes this is enough to pay the school fees of (some of) their children. Lutheran or Islamic women prepare fermented millet drinks, without alcohol, to sell at markets to people of the same faith.

The grasses that grow abundantly on the fallow fields between the compounds are used to make mats, roofs and especially granaries. Those who still know the ancient art can earn a substantial income from other villagers. Although people try to save for brick houses with tin roofs because that means an increased status and less frequent repairs, such houses are too expensive for most inhabitants. Granaries are still all made according to traditional methods.

6.3.4 Social investments

Investments in family and friends

Even between brothers and sisters of different beliefs, the exchange of gifts is normal and in times of crises they help each other. For example, my Lutheran host in Dzambou Centre looked after the small stock of his Islamic sister, who is married and lives in Baba Deli Fulbe hamlet. When she needed some cash he sold one of his own goats, instead of one of hers. At the same time, the dung of these goats could be used to fertilise his fields. Although this can be regarded as normal behaviour, in a way these are also investment activities, because the good relationship with his sister, and thus with her husband and his group, serve as a safety valve in times of hardship.

The fact that religion also does not cause deep divides between non-relatives is shown by this same man's social network. He invests a lot of time and effort in maintaining or even enlarging this network. His best friends are two Muslims, one a (second) brother-in-law. They were invited to attend the Christmas celebrations and the man himself was invited in return for the festivities marking the end of Ramadan. He discusses with them how to resolve problems concerning his own parents-in-law. In addition, he sends his son to the Catholic mission school in Sir and (without payment) works for the Catholic priests when they want information to be distributed around the village. At the same time he is active in his own church. He helped put up a church building and organises services and a field which is worked collectively by church members in the more isolated Tndmou area. It does not seem to be a conscious investments strategy to maintain relationships with members of different religions. Based on the general

tolerance of Kapsiki regarding religious beliefs, he simply chooses a wide range of different people to diversify his network.

At the same time, he is an example of the young men who heavily invest in being a good Protestant. He attended all the services, read the bible, prayed at home and became a catechist. When he married his first wife, who was also a Lutheran, he hoped to be able to build a different, more prosperous life with her. When she left him, as is one of the customs of Kapsiki, he was enormously disappointed and it took many years for him to get over this.

A good strategy for both mothers of grown up sons and for the sons themselves is for the mother to live in her son's compound. She can then help with different tasks and thereby reduce the tension that can arise between spouses. The mother herself gains a more secure place to live than between the co-wives in her husbands' compound. Living apart from a husband but in a son's compound is not regarded as divorce, so the mother can continue to use her husband's fields. In many instances, the (first) son will live near his father's house to make this arrangement possible. The only investment required is to visit the husband's/father's compound now and again to help with minor tasks and to deliver little gifts. By residing in her son's compound the mother is also investing in her future security. She helps the household with cooking (for example for visitors), cleaning and the production of crops, she looks after 'lonely' children, she acts as a counsellor to her son when he does not want to ask his wives for advice. With her active presence she acquires a place to live in her old age, either with the same son or with one of the grandchildren.

In Table 6.3.5 social cohesion is measured with the help of percentages of people who loan out ploughs and draught animals. It has to be said that, on the whole, not many households in Dzambou own ploughs. That means that the percentages of people who can loan out ploughs are not very high either.

Table 6.3.5 Percentages of people who owned or borrowed and loaned out ploughs and draught animals.

		Percentages of n				Percentages of owners	
	n	Own plough	Borrowed plough	Own draught animal	Borrowed draught animal	Loan out plough	Loan out draught animal
Baba Deli	86	26	6	29	3	23	12
Dzambou Tndmou	50	26	6	28	6	23	11
Dzambou rest	44	7	7	7	7	100	100
Dzambou total	180	20	5	21	5	49	41

The ownership of ploughs and draught animals in the rest of Dzambou in particular, is very low (7 % is three people). As a result, no conclusions can be drawn from the fact that 100 % of owners loan out. This same high percentage colours the Dzambou total numbers. The only conclusion that can be drawn is that there is no difference between Baba Deli and Tndmou.

Political investments

According to tradition, the first clearer and settler in a certain area becomes the chief and his offspring inherit the position. Such a position is an honourable one that brings with it some

privileges (such as free beer at household gatherings), but mostly it is also a burden. It asks time and effort to settle disputes between the other settlers and, in modern times, it makes you the unpaid authority representative. You have to collect taxes, distribute information and voice villagers' wishes. When higher authorities do not respond to these, it is the chief who has to deal with the angry reactions within the village and who gets the blame.

Happily enough there are still men who have the ambition to be village chief. Some even try to buy the position these days[71], because of the status that goes with it. This is possible because nowadays a village chief has to be approved by the district and sub-departmental authorities. If the authorities appoint a chief who is not a member of the royal line[72], his legitimacy within the village is questioned. However, in cases in which the higher authorities are involved, the village adapts itself opportunistically. Then a village chief with good connections at higher levels is handy. Villagers try to use such networks to make higher authorities aware of village needs. In short, village inhabitants do not invest in the choice of their local chief. None of the Dzambou inhabitants deliberately tried to influence the appointment of the chief with the aim of becoming better represented at the higher level and of thereby ensuring better governance of village affairs. Dzambou people talk a lot about the appointment of chiefs once it has happened, but in the end they take things as they come and make the best of it.

The same situation exists at national level. Within the democratic system of Cameroon, citizens can (theoretically) be politically active and support a certain party that they think will look after their needs more effectively. However, in Dzambou I did not encounter more than two men who were (slightly) engaged in this process. In the whole Sir region the most active person with regard to general politics lived in Oudava[73]. But because he is on his own he is very vulnerable. The villagers do not seem to be aware that they can gain more clout *vis-à-vis* the State authorities if they give more secure support to people like him. The loss of a deputyship during the last elections made people decide to vote for the RDPC at the next elections. They are not going to invest in a more secure democratic process. This is partly due to the illiteracy of the region: many voters do not know what they are doing. They put a voting card of a certain colour in the box arbitrarily (or following the advice of a neighbour or son), without even knowing for which party that colour stands, let alone what the party's manifesto contains[74].

Conflict mediation

As is depicted in section 2.4, conflict mediation is changed in a 'might is right' situation. This

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[70] The current village chief of Oudava earned a lot of money in this way when he was young. He used it to amass a cattle herd and finally even managed to buy the position of chief.

[71] The new Oudava village, a neighbouring village of Dzambou and Sir, acquired this independent position thanks to the current chief who bought his chieftaincy in Mogodé. Both the Sir and the Dzambou chiefs very much regret this development: "brothers should stay in the same village", they say, but what they mean is that the one lost a substantial part of his territory and the other had hoped to incorporate that same territory into his own.

[72] For information about the different lineages, and the royal (Mazeu) lineage in particular, see Van Beek (1978).

[73] Being the representative of the municipality, he used to be a member of the RDPC, but when he noticed the fraudulent behaviour of the administration and other RDPC members with certain power positions, he changed to the UNDP and that decision caused him a lot of hardship.

[74] During the 1997 parliamentary and municipality elections, at least a third of the men that went down to the voting stations did not know that they had to vote for two different things. Several of them, while being very unhappy with the incumbent mayor, nevertheless voted for him because they did not realise that the second box was meant to put in the votes for a new mayor, and that the chosen colour represented the incumbent mayor.

means that a general investment in the conflict resolution realm should aim at the improvement of the hierarchical position within the village. Then, internal conflicts will be judged by co-villagers in favour of the person of higher order. In the case of conflicts outside the village (whether with the authorities or with inhabitants of other villages) the lower placed co-villagers will make a bigger effort to support the higher-placed person, in an effort to gain a better position themselves. When the better position cannot be reached by way of wealth ranking or relationship with chiefs, other methods have to be used. One of these can be creating a name in wisdom, claiming longer term ancestry of one's family and royalty thereof, or by demonstrating a good relationship with the higher authorities. The latter seems to resemble circle reasoning, but it is feasible, as is shown by two inhabitants who regularly visit Mogodé to help out at the *lamido*'s or sub-prefect's house or court/bureau[75].

In addition to the general position within the village, the overall importance of one's social network is a major factor. On the one hand this influences the hierarchical position as such (many important friends make you important too). On the other hand, if the ties between the members of one social group are strong enough, it also makes a lower placed person stronger by way of numbers. For example, if witnesses are required, really good friends are indispensable. Even if they do not serve as witnesses, their insistence in a difficult matter makes judges side with them more quickly[76].

In a more ad hoc sense, people nowadays tend to invest more effort and money in conflict resolution by involving the police more quickly. They do not trust village conflict resolution systems and resort directly to the higher authorities, despite them knowing that this will cost them a lot of money. They say that they prefer to pay more if it gives them more security as regards punishment of the offender. More often than not this is related to general feelings of (in)justice. There are inhabitants that are involved in year-long court sessions because they do not want their adversary to go free. Whether or not this can be seen as a long-term investment in the sense of "you can't escape him, so do not do anything bad to him" remains to be investigated; especially when the amount of money lost is very high[77].

Investment in the solution of conflicts with the State is more difficult. Of course this is directly related to the political security of the whole village and the village inhabitants separately. But here again, the social network within the village or region plays an important role (see the end of this section and note 74).

The need to have more security against arbitrary actions from State officials related to accusations of criminal offences makes people again seek a better social position within the village. Next to that, they try not to upset the authorities in general, although their autonomous character defends them from being too docile. Another important domain of conflicts between cit-

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[75] That this is a risky undertaking is shown by the son of one of the respondents, who visited the *lamido* so often that he got annoyed and forebode him to come to his court ever again.

[76] A good example is the case of the field sold between Dzambou and Oudava (January 2003) in which the buyer (a sub-neighbourhood chief) was objectively in the right. However, the seller was able to claim more money, even two years after the deal, because he had more family and friends around him during the hearings at the market and they kept on coming back several days in a row to insist again and again on a re-judgement.

[77] Some people simply referred to honesty and justice and sometimes, but not always, referred to Christian norms. For them it seems to be an issue related to morals and not economics or investments. Of course defending moral codes has a community function (with a very long-term effect) and this could be the motivation of certain individuals, especially when they speak of "I do not want to live in a village with so many liars."

izens and the State is the tenure of land. These days adult education teachers tell the inhabitants of the importance of land tenure titles and this means more and more people are starting to register their territories. However, because legitimate registration is very difficult, within the context of village reality people organise written proofs of traditional ownership rights and their sale. Unfortunately, such registration between farmers does not have a legitimate status for the State.

In the case of a conflict between the State and farmers over land that the State wants to categorise as forest, former owners (according to local traditional customs) do not have many rights if their property is not officially registered. Consequently, the people involved look for other options to safeguard their interests. One of these is Act 94/01 of 1994 on the regime of forests, wildlife and fishery[78]. In Articles 26 and 27 it states that, when a certain forest is classified as protected, the autochthonous population can go on with its 'normal use'. If such rights become limited (or denied outright) the population should be given compensation (according to rules laid down in an up-to-date decree). The classification can only take place when all the people that have made investments in the land concerned are compensated[79].

When, in the current case, some of the villagers heard of this right, they started to inform others to make sure that enough people register as owners. They thought this investment would increase the possibility of payment. Indeed, several users of pasture fields willingly subscribed to the list of 'field owners' that the sub-prefect made during the first information meeting with the villagers. They thought it a good, or at least feasible, way of resolving the problem. The definition of ownership of the sub-prefect, however, did not correspond with that of the Kapsiki of Dzambou. For him, and according to the 1994 Act, only those users that improved their fields would be eligible for compensation. Nevertheless, up until now, although the border poles have already been placed, these registered persons did not receive anything in cash or kind.

On the contrary, those Dzambou farmers who indeed registered now regret their investment in the ownership list. Meanwhile they have become afraid that the list of names will be used against them. The sub-prefect has already accused one of the persons, who expressed to be against the installation of the pasture reserve, of insurgency[80].

Cultural investments

In Kapsiki culture seasonal highlights are celebrated throughout the year together with other Kapsiki. This has a bonding (within the village) and a binding (between the villages) function. An example of such an occasion is the "Lah festivities" that celebrate the harvest and the new marriages of the last year. In a festival cycle, the different Kapsiki villages of the Mogodé district take turns to slaughter animals, brew beer and make music and dance while eating and drinking together for a number of days. Most Kapsiki do not visit (all) neighbouring villages during their festival days to join in the celebrations, but some of them do and some of the people from Dzambou at least go to Mogodé when it is that village's turn. Apart from going from compound to compound to drink the millet beer and to eat the special groundnut-with-ashes

[78] For an extensive discussion of the 1994 Forestry Law see Nguiffo (1994).

[79] See also Chapter 4.

[80] This was the representative of Sir Municipality, living in Oudava. It was only at the departmental court in Mokolo that a judge dared to declare this accusation false and only after the hearing of many witnesses/co-villagers (again a sign of the importance of social bonds in the village) and when the sub-prefect himself did not appear at the court session.

paste, the festival days are used to confirm marriages. During the year, when all harvest activities have been completed (the end of January until March), marriages are consummated by the bride residing at her new husband's home for a period of one month. After that, she returns to her father's house to await the Lah festival and to gather utensils and belongings for her new home. On the first day of the village festival, relatives and friends (especially women) arrive at her father's home to give her presents and to accompany her subsequently to her new house. The long procession of singing women lead their 'victim' first to a trustworthy neighbour of the groom who has to take over the father's role from the bride's father. This connects the bride's neighbourhood to that of her new husband and makes sure she is protected now her own father is so far away. It also gives the groom the advantage of a more secure marriage and protects him against hasty divorces.

Kapsiki acknowledge the greater psychological distance between members of different villages and those within villages. To strengthen bonds between the villages in the event of cross-border marriages, special attention is paid during the festival dances by the newly wed men to their 'outsider' wives[81].

Even Muslim and Christian villagers visit the dances (although perhaps only as spectators), to demonstrate their connectedness with their village and the Kapsiki as a whole. This also reflects the fact that, although the different religious groups invest in their churches, these same religions do not (so far) pose a threat to the cohesion of the village. Between Christians and Muslims a kind of feeling of togetherness exists because of the idea that they adhere to a modern religion. On the other hand, Catholics and traditional believers are happy to drink beer together. This binds Lutherans and Muslims, because they can look down on those 'alcoholics'.

In general, Kapsiki like an interesting chat and a good laugh. The habit of telling jokes with double meanings, using (and inventing) verbs with double meanings and singing "scabrous youth songs" (Van Beek, 2004, pers. comm.) diminishes internal conflicts and binds them together. Also the bragging and laughing about violence (for example, about the taking – not 'stealing' – of somebody's property, or about a 'strong wife' standing up to her husband and, of course, about the attacks by ancestors on neighbouring villages or the Fulbe[82]) are binding elements. In day-to-day reality, however, violence is not intended to escalate. At village level, plenty of very nasty stories of the past are told on this subject which serve as sufficient warning. In addition, at household level, spouses are not meant to beat each other up.

The general livelihood situation as well as the insecurities that exist in the village, together with people's investments as described in section 3 are summarised in Table 6.3.6.

In short, the bulk of insecurities does not concern the natural domain of the village, but rather the other three domains. The environment has a moderately safe status and population pressure is not very high. However, as regards the worst off third of the population, they suffer from a lack of land availability and a resulting shortage of food production. In addition, specifically investments in the natural domain are difficult, thus, future environmental insecurities may be feared.

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81 See also Van Beek (1989: 631), about villages "celebrating its new members".

82 Based on personal observations and on the personal comments of Van Beek (2004).

Table 6.3.6 *Summary of current level of insecurities and investments in the domains of the 'insecurity com plex',* based on 'capitals'[83] of the village as a whole (- = bad; o = moderate, + = good; in the investment column: - = no investment; o = a bit investment; + = a lot of investments)

	Average level of village	Situation of worst off third of pop	Security (= ex-pected level in future)	Invest-ments	Investments details
Physical basis	o	o	o	n.a.	n.a.
Population density	+	+	-	-	No real family planning
Land availability	+	-	-	o+	Various qualitative methods by small number of persons; invasion of pasture
Commod. of land	-	-	o	o	Rising: more safeguarding by owners
Food pro-duction versus needs	+	-	o	+	Crop diversification; ploughs; etc.
Health	o	o	o	o	Rising
Education	-	-	o	o	Rising
Cash crops	o	-	o	o	Everybody, but low scale; no sales deve lopment
Livestock	o	--	o	o	Everybody tries, not really successful
Non-agricul-tural possibilities	-	-	-	o	Low scale; low technology
Socio-cultural	o	o	o	o	Loss of old systems, but some increase of new ones
Political	-	-	-	-	Almost not
Land allocation	-	--	-	-	'o' when regarding pasture lands, but quick retreat
Conflict resolution	-	--	-	-	Ad hoc muddling through

6.4 Intrusion of other niche: Box 2

In combination with, or apart from, all the investment options described, some farmers choose to enter the designated pasture area (see Figure 6.2, Box 2). For decades it has been used solely as grazing land, combined with some extraction of construction wood and minor 'wild' products. Only a small group of Islamic 'cattle keepers' (called such by the rest of the village) founded a tiny settlement just inside the boundaries, almost at the start of the period of pastoral use. Initially they started they built only simple compounds, but in the course of time they cleared fields around their houses and built a water well to provide for their drinking water needs. Nowadays this settlement is called the "Fulbe neighbourhood".

Thus, the original grazing land was more or less divided into two parts: the empty bush and the "Fulbe settlement"[84]. When, ten years ago, the first cultivators passed the boundaries of the so-called 'empty pasture', as agreed upon a generation before, and started to cut down trees to prepare fields for agriculture, hardly anyone was bothered. However, other people quickly followed the example of these pioneers and soon a whole segment of the pasture area had become

[83] See Chapter 2.

[84] The name 'Fulbe settlement' is derived from the fact that it used to be inhabited by Fulbe, alongside Kapsiki converts, and because the Kapsiki tend to denominate all Islamic persons "Fulbe", being the name of the ethnic group that originally brought the Islam to these regions of North Cameroon (see Van Santen 1993, Schilder 1994, and Chapter 4 of this thesis). This adoption of the Fulbe name gives Islamisation an additional ethnic quality.

cultivated land. After a number of years, a second wave of farmers had arrived and then a third[85] and each time the boundary of the pasture was redefined (see Figure 6.5). To an ever increasing degree, the pasture area was at risk of being totally invaded.

Of the twenty-three users in 2001, eight started using the pasture fields one or two years ago while five others did so three or four years ago. Another seven respondents mentioned that they have used their pasture fields "a couple of years now". That means that at least thirteen people started to use the pasture fields after the announcement by the authorities that a reserve was to be created and there may have been more. Only three of the 2001 users certainly started earlier.

The reasons and motivations of farmers for choosing this invasion option will be analysed in the following sections. Additional reasons will also be sought to explain the difference between farmers that left the area and those that continued. After the authorities had declared that the area was to become official forest pasture land, some people relocated their agricultural activities to 'outside' fields. Others, however, continued inside the delineated boundaries. Confronted with these cultivators and the fact that most of them had already prepared their field and even sowed it, the sub-prefect gave extended permission for the land to be used for one more production season.

6.4.1 Reasons for intrusion in the environmental domain

The surface of Dzambou seems to be vast and there does not seem to be a general scarcity of land. There is not even any evidence of an overall decline in production. There are, however, individuals and families who are experiencing increased pressure on their fields. It is the quality or quantity of fields outside the pasture area that may influence farmers' options. Some cultivators do not have much land available, or their land is infertile. To them the scarcity is obvious. Those whose ancestors cleared fields in the pasture area may want to use those fields. Others in the same position, but without traditional ownership of territory in the pasture area, may want to hire or borrow from owners because of the vast quantity or good quality of the pasture fields and because the owners are interested in loaning or renting out for a variety of reasons.

In order to determine the influence of position, quantity and quality of fields on the use of pasture fields, Table 6.4.1 shows the field position of fields owned, divided among owners and non-owners of pasture areas, and users and non-users thereof. In other words, those who cultivate or not within the pasture boundaries as they were delineated by the authorities' 2002 boundary markings. In this table, ownership of fields is defined according to Kapsiki tradition, that is on the basis of whether the fields had been cleared in the past by the actor or one of his ancestors and whether they were still family (or personal) property (not sold or given away). The position of fields can be three-fold (or a combination thereof): 1) fields can lie within the pasture boundaries that are delimited by the authorities in 2002 (excluding the Fulbe neighbourhood from the pasture); 2) they can lie within the traditional boundaries, but outside the delimited area (that means in the Fulbe neighbourhood) or 3) totally outside the pasture zone. From table 6.4.1 it can be concluded that there are no households that depend totally on the pasture for their fields. Yet, there are four households that depend on the fields in the Fulbe settlement area. They run the risk of losing their fields should the authorities change the implemented delineation and resort to former boundaries in order to avoid havoc (see below).

[85] Most of those invading farmers came from Dzambou, but some of them originate in Viti in the North-West.

Table 6.4.1 *Number of users and non-users of pasture fields and the position of owned fields (shared or private).*

	Users of pasture fields[a]		Non-users of pasture fields	
	Owning pasture fields	Not owning pasture fields	Owning pasture fields	Not owning pasture fields
In pasture only	0	n.a.	0	n.a.
In past + outside	13	n.a.	16	n.a.
In past + Fulbe corner	0	n.a.	0	n.a.
In past + Fulbe corner + outside	3	n.a.	2	n.a.
In Fulbe corner only	n.a.	0	n.a.	4
In Fulbe corner + outside	n.a.	1	n.a.	7
Outside only	n.a.	6	n.a.	130

[a] = a 'user of a pasture field' is somebody who cultivated a field situated within the official 2002 boundary, at least until the moment of delineation.

There were some inhabitants of the Fulbe settlement (four households) that used fields within the pasture boundaries, although they are very much in favour of the pasture and think the clearing of trees within the area a real waste. This strategy may be based on the feeling that leads to the tragedy of open access: when nobody regulates the pasture, not using it is a personal loss, because at the same time, others acquire a (short-term) gain. The long-term loss is going to occur anyhow. The moment that the sub-prefect forbade the agriculture within the pasture zone (April 2002), they stopped cultivating there. These people were very happy with the intervention of the authorities.

There is only one owner-user who lives outside the Fulbe settlement and who stopped straightaway, but he declares that he did not know the authorities would grant another year of use, otherwise he would have continued. Thus, in total 12 owner-users continued cultivating during 2002 and they all want to continue afterwards[86].

Intrusion of pasture fields is not motivated by absolute necessity based on field position. Table 6.4.2 shows necessity based on the fertility of other fields.

Table 6.4.2 *Number of users, non-users and owners of pasture fields with a certain soil fertility of fields outside the pasture* (n = 180, but respondents can give different types of fertility for differ ent fields, so the total number is more than 180.)

	good	Good + moderate	moderate	Moderate + bad	bad	Good + bad	Good + bad + moderate
Users	7	2	3	3	7	1	0
Non-users	64	18	44	2	29	20	1
owners	9	1	10	3	10	0	1

This table shows that pasture field users have bad or good fields to cultivate outside the pasture equally often. Moreover, as far as owners are concerned, the division of fields is spread

[86] Of the six user-non-owners only two continued cultivating in the pasture after the delineation.

over good, bad and moderate. It seems as if the state of fields outside the pasture has not influenced the choice to use pasture fields or leave them alone[87]. Those users with good fields elsewhere either had quite a number of family fields and/or private lands acquired by purchasing or clearing. The worst position related to surface area was occupied by two household heads from the same extended family who have to share 3 ha with four male (extended) family members (household size five and four persons, meaning access to 0.2 ha and 0.15 ha per person)[88].

The last reason in the natural domain that can play a role in starting cultivation in the pasture area is related to distance. Although, in general, only those farmers that live within reasonable distance to the pasture use the fields therein[89], this does not offer any explanation as to why they start using those fields now. Moreover, the farmers the closest to the pasture, those of the Fulbe settlement of Baba Deli, all refrain (now) from using pasture fields, except for those fields that surround their compounds and lie within the traditional boundaries only. They explain that specifically "the inhabitants of 'Dzambou' and not those of Baba Deli started cultivating in the pasture"[90]. For them this is all the more amazing, because they think Dzambou is so much further away.

That this idea of "only those farmers from Dzambou invade the pasture" is based on false perceptions is shown by the data: of all the 22 users, 9 live in Baba Deli neighbourhood. Again this shows the general social distance felt between Baba Deli inhabitants and the rest of Dzambou. It has to be added, though, that eight of those nine farmers stopped cultivating after the delineation and only two of them are against the official delineation of the pasture. This is the reverse of the figures of Dzambou Centre and Tndmou users[91].

6.4.2 Reasons for intrusion in the human domain

The persons that start(ed) using their fields in the reserve and mention that they are against the installation of the pasture are slightly different from the rest of the Dzambou inhabitants with regard to their health or their investments in health. They see to the vaccination of their children, in the event of illnesses they visit the health post more quickly even if they have no money[92] and all their wives visit the antenatal consultations at the hospital. Of course they are mostly young and healthy men (mean 35 year, with a range from 27 to 43), but that is because the pasture is far from the compounds and the trees to be cut to clear a field are high. Old or ill people are not able to perform one of these tasks, whether they want to or not.

In the field of education, pasture 'invaders' who do not want to quit are more educated than the village mean: 70 % have had some primary school education and 80 % send their children to school.

Thus, they are younger men with higher capacities (own education and information), more motivation to achieve a better position in life (see for example the number that send their chil-

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87 Of course, those individuals without good fields went into the pasture because of the lack of fertile fields elsewhere, but this cannot be used as a general, and therefore clarifying, tendency.

88 These are members of a relatively well-educated family with their compounds in the north of Tndmou, adjacent to the pasture. Anger about the restrictions on using the pasture fields is high within this extended family.

89 Namely either in Baba Deli or in Dzambou Tndmou (except for only two users): see Figure 6.3.

90 As has been explained before, inhabitants of Baba Deli, although officially part of the whole Dzambou village, consider themselves as a separate entity, more related to Oudava (see Fig. 6.3).

91 Eight out of thirteen users are against the pasture. On two occasions the respondent's opinion was unknown.

92 They explain that they count on credit possibilities, "The nurse won't send you away if she sees that you are really suffering. You can always pay afterwards."

dren to school) and less timid with regard to the authorities. Contrary to former generations, they know that Cameroonian citizens have rights and they referred repeatedly to these during the interviews and talks.

6.4.3 Reasons for intrusion in the economic domain

The human capital profile outlined leads to a different way of looking at economic possibilities. These young men have learned about the possibility of commoditisation of land, they 'see' (and discuss between them and with the interviewer) the future value of land (if they are not yet already perceiving a high economic value) and do not want to lose such land just like that. They are more oriented towards modern life and know about the existence of television[93] and higher production systems. They are not geared towards traditional productions or production systems, but want to have enough fields to use modern systems or even to escape village life altogether.

Some of them, who acknowledge that they are not able themselves to cultivate their entire surface area, want to have income from rent, especially from the fertile pasture lands. When they do aim to acquire more farm animals, they do not foresee any shortage in grazing possibilities saying, "there is so much fallow land between the fields now"[94]. For them the installation of a pasture reserve is not necessary. On the contrary, it would mean that the needs of (several) Dzambou farmers are denied.

6.4.4 Reasons for intrusion in the social domain

Although, as stated in the Chapter 4, Cameroon is a hotchpotch of different ethnicities, in this case the whole village consists of only Kapsiki inhabitants (except for two Fulbe families in the 'Fulbe settlement'). Although villagers in general and Fulbe settlement inhabitants in particular, use the name "Fulbe" for Muslims, they still make a difference between the "real" Fulbe and "We Kapsiki". Many jokes are made by the Fulbe about the length of Kapsiki noses, to which Kapsiki reply with jokes about the relatively recent arrival of those "whites"[95]. Consequently, one can conclude that, at least in this case of discord, ethnicity plays no role.

The situation may be different when religion is involved. All types of religion are represented within Dzambou. As has been mentioned earlier, most of the villagers adhere to the traditional Kapsiki religion[96], but several of them are Christians that belong to the Catholic, Adventist or Lutheran churches and some are Muslims. Different religions can even be found within one family, sometimes even in one household and tolerance with respect to religion is high. Because it turned out that mainly inhabitants of the Islamic Fulbe settlement helped the authorities with the placing of border poles around the pasture reserve, the question rises as to whether it is religion as such that makes people choose the side of cattle keepers (as if in memory of the original occupation of those that brought Islam, and their cattle, to the country).

Users and owners of pasture fields do not, however, specifically belong to one of the three

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93 At least seven of them asked me about, or explained, the possibilities for obtaining and watching a television in the village or in their own compound.

94 Personal interviews and group discussions with village inhabitants, October 2002 – January 2003.

95 In general, the Fulbe have a lighter skin than the non-Fulbe and an 'Arabic' nose, while the Kapsiki have broader, short noses. However, inter-marriages have evened out a lot of these external differences.

96 For an explanation of that religion see Van Beek (1978 and 1987).

religions or their churches[97]. Neither are they specifically restricted to one of the Dzambou neighbourhoods. In some neighbourhoods more pasture field users can be found (like in the northern half of Tndmou), but this is due more to the fact that family members used to build their compounds in the vicinity of fathers' house. As a result, some sub-neighbourhoods consist of extended families that together (again like in the northern Tndmou case) own a specific part of the area. Their forefathers normally cleared fields that were situated adjacent to each other in the same region.

Of course, these extended families that experience the same problems are strong alliances designed to withstand other users or even the authorities. Even when a nephew or uncle is able to survive without a pasture field, the lack of fertile lands available to his family members and the perceived injustices perpetrated against his relatives makes him angry enough to be a potential ally in future fights.

In the political domain it seems as if the thirteen (and perhaps seven others[98]) that started using the pasture fields after the announcement of the reserve installation, chose to use their pasture fields as a deliberate strategy to counter the State's plans. Perhaps they counted on the State law that obliges the buying out of traditional users in the case of forest reserve categorisation. Whether or not this is true cannot be concluded, because none of the respondents gave a positive answer to this type of question. It can be assumed that at least some of these users did not know of the existence of such a law beforehand and that, if they did know, could not have known of the difference the State authorities make between actual users and owners according to traditional custom (see below).

6.5 Assertion of rights to fields: Box 3

The conflict situation, as depicted in Box 3 (see Fig 6.2), only arises when two (or more) parties are opposing each other. Both continue to stress their access, use or even ownership rights to the same piece of land. At the same time it is clear that mutual use is not possible. Because conflict asks for two parties that ascertain their rights, here I will first depict the claims of the cultivators.

It is not only farmers that own, use or want to use fields in the pasture area, who claim rights there. Also other inhabitants of Dzambou, and even outside Dzambou, do have an opinion about the legitimacy of the installation of the pasture reserve.

6.5.1 About the borders

Everyone agrees about the limits of Ardo's zone: originally it was far bigger than at the moment (see Figure 6.5). Yet, after 20 years of strict pasture use, the reserve started to diminish due to invading cultivators from all directions - sometimes up to the centre of the area - and

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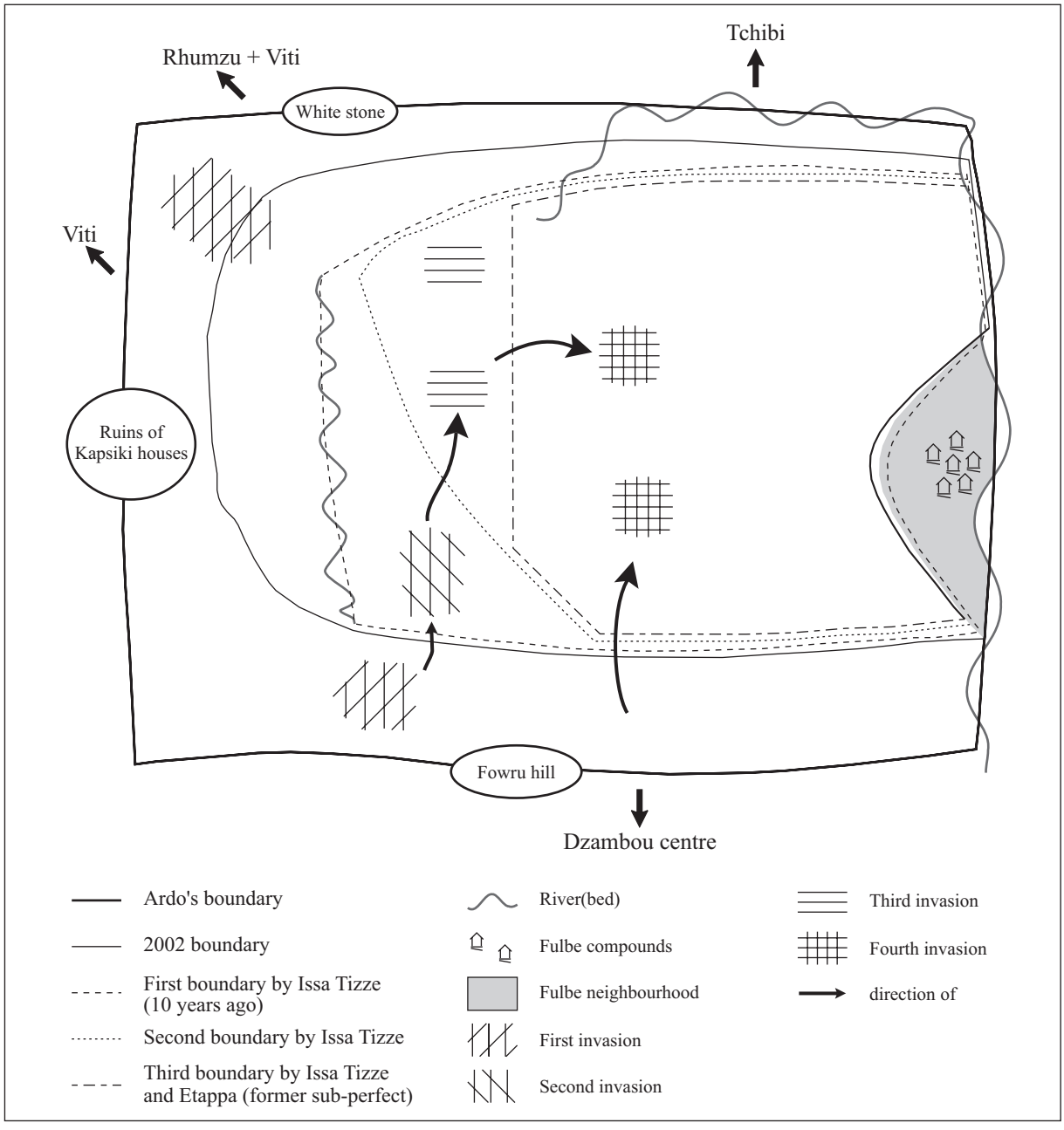
[97] Four of the users are Islamic, seven adhere to a traditional religion and nine are Christian. The numbers among the owners are: 5 Islam, 17 traditional and 11 Christian.

[98] Most probably some of these seven did not want to oppose the State with their pasture cultivation (even if they did start after the announcement), because they belong to the group very much in favour of the pasture. They stopped their cultivation activities in the pasture zone directly after the instalment of the boundaries.

due to the settlement of 'Islamic cattle keepers' on the east side. First, these cattle owners only built their houses there, so it did not really disturb the pasture. But later on they started to cul-

Figure 6.5 Boundaries of Baba Deli pasture reserve over time



tivate around these houses and, as a result, the pasture area lost a considerable part of its surface area. As soon as the authorities decided to establish the pasture area officially to counter agricultural invasions, discords arose between the villagers over which boundaries should be used and where. Some of the cultivators that do not live in the "Fulbe settlement" of Baba Deli stick to the original boundaries from the *Elhadji* Ardo time. "Why should the Fulbe be favoured? When we are not allowed to cultivate in the pasture reserve, they should not be allowed either. They are no different to us!"

In the whole village, 22 household heads (12 %) are against the pasture as it is delineated by the authorities, because of the inequality that it causes (see Table 6.5.1, third column). They express their willingness to assist field owners in their resistance of both authorities and (what they call) cattle owners. They agree with pasture field users when they continue to use those fields despite the official delineation.

6.5.2 Pasture or arable land

The bush area of Baba Deli is denominated as pasture reserve and has, indeed, been used as such for decades. Today's inhabitants of Dzambou agree about the existence of this grazing area in the past. Unfortunately, they do not agree about the current status of this zone. Some 40 years ago a rich cattle-owner, *Elhadji* Ardo, who roamed the bush with his herd, started an area specially set aside for cattle and which was not used for agriculture. According to today's cultivators it was an agreement between him and the first cultivators, as a 'win-win' arrangement. Because there was enough space to cultivate elsewhere, the grandfathers and fathers of today's respondents consented to leaving this part of the recently cleared forest to cattle. "But", many of the farmers say today, "only for the time being!" According to the respondents the deal was that, when necessary because of increasing infertility of the fields used, the cultivators would return and the cattle keepers would switch to the exhausted fields. Thus, the invading farmers are motivated to do so because they think it is their right and because it is in line with the former agreement and their customs. The offspring of the original clearers should now inherit the land.

Table 6.5.1 *Division of opinions about the pasture*[99] in Baba Deli, Tndmou and rest of Dzambou and of owners and intruders (=users) (n =172; 21 x double opinion, 2 x three opinions; intruders: 2 x double opinion).

	Against, no need	Against, unequal	Against, no land	Total against	Pro pasture	No opinion	Total
Baba Deli	7	10	4	21	64	5	90
Tndmou	19	6	5	30	19	6	55
Dzambou-rest	24	6	2	32	16	5	53
Total village	50	22	11	83	99	16	198
intruders[a]	5	6	2	11	10	3	23
Intruders that stopped	2	0	1	n.a.	6	2	n.a.
Owners of past. field	7	5	7	17	19[b]	2	33

[a] = 8 users are from Baba Deli in total
[b] = 5 x inhabitants of the Fulbe neighbourhood

For today's farmers, whose fields seem to be loosing their fertility, the time has come to fulfil that agreement. Even those without fields in the pasture area, but with diminishing field-

[99] 'No need' means, that the respondents think the pasture is unnecessary because of an abundance of grazing land or a lack of cattle. 'Unequal' refers to the idea that inhabitants' rights should be the same: everybody or nobody can use the pasture lands for cultivation. 'No land' means that the respondent is against the creation of pasture because (s)he needs the fields there because (s)he lacks other fields. 'Pro pasture' can mean the respondent is for the creation of pasture land without restriction or is for it but with slightly different boundaries. Most people who are both for and against want a pasture zone, but not in Baba Deli.

fertility, can see the logic of this reasoning. All claim the fields within the pasture boundaries for themselves or their co-villagers. And they expect cattle keepers to carry on using the other part of the village territory. The majority of those farmers do not see the need for pasture in the first place (see Table 6.5.1, second column). There is plenty of fallow and bush between the fields and around the compounds that can be used by cattle all year round, they say. "There is more grazing land than cattle, and that will continue to be the case for a very long time".

In addition, there are some farmers who do not have enough land themselves, as explained above, and have no alternative than to start fields in the pasture, but this is a small minority. In general, the farmers that claim that there is not enough land left all have several other fields at their disposal and these also have a moderate to good fertility status. The discrepancy between their claim of a lack of land and their factual information about their fields' situation can be explained by the tangible feeling that the land area and level of fertility are diminishing, populations are increasing and by the wish to modernise, a wish to enter the new way of life.

There is a remarkable distribution throughout the village of farmers who claim the pasture to be arable land that should also be used as such. It is "the rest of Dzambou" that hosts a significant majority of claimants. Although Tndmou neighbourhood, and especially Dzambou Centre, are further away from the pasture than Baba Deli, from the northern part of Tndmou where a big amount of contestants live, it does not take that long to walk to a pasture field.

The same applies to the herding of cattle there. Nevertheless, Dzambou cattle owners now prefer to herd their cattle in the vicinity of their compounds so that more manure is produced on the fields close to their homes and where there is more security against theft. The denomination of a pasture area would sooner or later make cattle owners retreat to that zone. This would be a loss for those with only fields outside the pasture. They would then be faced by the problem of where to acquire manure. Thus, for some of them, the sooner the pasture is designated as arable land and the fallow between the houses as grazing land, the better . If the pasture fields could indeed be used for agriculture, the risk of crop damage would not be very big because wide enough corridors from one fallow field to the other would remain open.

Table 6.5.2 *Number of village inhabitants with a certain field position and their opinions about the pasture reserve* (n = 172; 21 x double opinion; 2 x three opinions; 1x no fields at all)

	Totally agreed	Agreed diff. form	Nno opinion	Against, no need	Against, inequality	Against, no land	Total for	Total against
In reserve only	0	0	0	0	0	0	0	0
In reserve + outside[a]	11	7	1	9	7	6	18	22
In reserve + F-settlem.	0	0	0	0	0	0	0	0
In F-settlem.	4	0	0	0	0	0	0	0
In F-settlem. + outside	5	1	1	1	2	1	6	4
In F-settlem.+ reserve + outside	4	0	0	0	0	1	4	1
Outside	33	34	14	40	13	1	66	55

[a] : outside = fields are situated outside the pasture reserve as well as outside the Fulbe (F-) settlement.

Although there is a difference in opinion about the pasture between the two Dzambou regions, the division of opinions for or against the pasture seem not to depend on the position of the

fields (see Table 6.5.2). The opinions of all persons with some fields in the pasture are evenly divided between those for and against (22 versus 23). Of all the Dzambou inhabitants who have only fields outside the contested area, a small majority of 66 versus 55 is for the creation of pasture land.

An opinion on the pasture can, however, be shaped by the perception of the field-owner of the usefulness of his fields and the possibility of getting a sufficient yield from them (see Table 6.5.3). Indeed, although the correlation can only be seen when bad and moderate fields are taken together, and is then still not significant, field infertility seems to make people aware of the necessity of the use of the pasture fields.

Table 6.5.3 shows that a majority (112 persons out of 198) consider (some of) their fields to be properly fertile, although they are sometimes complemented with moderate or even poor fields. This underlines the remark about the general scarcity position of the total village (see above). On the other hand, one can say that the better the fields, the higher the ratio between the pro and the contra pasture opinion: this ratio is 62 : 41 for people with good fields and 33 : 34 for people with moderate fields. A calculation of the significance for a pro or contra pasture opinion of a certain field composition shows that χ^2 remains far below the threshold ($\chi^2 = 7.09$; test statistic 21.0). People with only moderate and/or poor fields divide their opinions about the pasture according to the ratio: 37 in favour and 42 against. For the division of the opinion of these people against the opinions of all those with at least some good fields, $\chi^2 = 3.48$ (against a test statistic of 5.99). Even inhabitants with only poor fields are not significantly more against the pasture than all the other inhabitants $\chi^2 = 1.03$; test statistic = 5.99). Thus, it is not possible to conclude that when people have less production opportunities and perceive the field-situation as more pressing they are more opposed to the reserve. Most probably this effect can only be seen in the case of those who actually go into the pasture area to cultivate (see earlier sections).

Table 6.5.3 *Perception of soil fertility of used fields versus opinion on pasture* (n = 172; 21 x double opinion, 2 x three opinions), sometimes different fields of one user are categorised differently (e.g. one person uses a good field as well as a moderate field).

	Totally agreed	Agreed, dif. form	No opinion	Against, no need	Against, unequal	Against, no other land	Total	Total for	Total contra
Good	24	17	5	16	6	3	71	41	25
Good and moderate	6	5	1	4	2	1	19	11	7
Moderate	10	9	3	15	6	3	46	19	24
Moderate and poor	1	1	0	0	1	1	4	2	2
Poor	10	6	4	12	4	0	36	16	16
Good and poor	5	4	3	3	3	2	20	9	8
Good, moderate, poor	1	0	0	0	0	1	2	1	1
Total	57	42	16	50	22	11	198	99	83

In fact, anger about the creation of the pasture area is evident among both young and older men. The latter consider the authorities' activities as leading to the loss of past investments, made by people from the same generation as they themselves. They fear a disappearance of traditional norms and rules. For them personally it gives rise to a feeling of insecurity in general, but also with regard to their own efforts in the past. They do not know when the authorities will come and take their land and designate it pasture or something else they deem necessary. In such a situation they are even more fiercely opposed to the delineation and believe that, if there were any justice, the process would be reversed.

6.6 Counter-assertion and conflict: Box 3

When Kapsiki started cultivating in the contested pasture area of Baba Deli, they claimed it to be their right. "These are our fields". There would have been no problem if the other users had acknowledged this right straight away and had withdrawn. However, that was not the case. Part of the contested area is used as settlement area and houses have been built there. The Fulbe-Kapsiki have cleared some 'home fields' around these compounds, but for the rest they want the area to be strictly set aside for grazing. They also have historical arguments to underpin their claim.

In fact, the whole neighbourhood closest to the pasture has the highest amount of inhabitants supporting the idea of a specific grazing area (Table 6.5.1). Even when all the household heads of the Fulbe settlement are not considered, Baba Deli is pro-pasture! With these two opposing assertions the conflict of Box 3 is a fact (see Figure 6.2).

6.6.1 Environmental domain

Physical basis

In general there is no difference between the soil types or climatic circumstances of those who claim the pasture to be for cultivation and those who want it to be grazing land. We have seen that there is also no significant difference in field disposition of the different claimants. But, those who support the creation of the reserve experience another type of land scarcity. This concerns cattle owners who do not have enough room for their cattle because their herds are too big and the corridors between the fields are too small, or farmers who foresee such a problem in the future. "If people go on producing a lot of crops, they will grow rich. Then they will buy cattle - everybody does – and where must they graze without disturbing the fields if there is no pasture area?"

According to the departmental head of the animal husbandry service (Djonwè 2001), the number of cattle decreased between 1985 and 2000 from 125,407 to 71,766, and continued to decrease in the last two years (Djonwé, pers. communication, January 2003) due to out-migration to the North Province[100] and Nigeria of big cattle owners and the sale of cattle by those who stayed in the region. Djonwè attributes these two phenomena to the decrease of pasture surface, because of the growing population and the need for more agricultural fields.

[100] The North Province used to be infested with Tse-Tse flies and trypanosomiasis, but with chemical pesticides being more readily available and thanks to zoo-technical measures to decrease the infestation, this area is now a good cattle grazing region (see Boutrais 1999).

As we have seen, the region of Dzambou does not suffer from an excessive population density. One may even state that in the situation of moderate to small population density combined with an out-migration of cattle, the abundance of pasture land is even more obvious. But the pressure felt by cattle owners in the past, that made them leave the area, can still be perceived today by current cattle-owning inhabitants. Thus, was it indeed an attempt by cattle owners (or those who want to have cattle) to safeguard a perceived last resort of pasture, that made them ask for the delineation of the Baba Deli reserve? Most of them have experienced a decrease in personal (or familial) cattle herds and numbers of cattle during their lives. Table 6.6.1 shows the opinions on pasture in connection with cattle ownership.

Table 6.6.1: *Number of people with a certain number of cattle and their opinions about the pasture reserve* (n = 172; 21 x double opinions, 2 x three opinions).

	Totally agreed	Agreed, diff. form	No opinion	Against, no need	Against, inequality	Against, no land	Total for	Total against
> 9 cattle	8	4	2	6	5	0	12	11
3-9 cattle	6	3	2	4	1	0	9	5
< 3 cattle	43	35	12	40	16	11	78	67

Table 6.6.1 shows that a very small majority of the big cattle owners favour the pasture. Surprisingly, among the non-cattle owners a small majority of those who do have an opinion are also pro-pasture area (78 versus 67). It is among the owners with a moderate number of cattle that we see the clearest support for the pasture (9 persons for versus 5 against), although the numbers are small. The conclusion has to be that the variable 'cattle ownership' does not differentiate the pro-pasture inhabitants from those who are contra. A slightly more convincing relationship can be found for the more extended cattle-related variable "cattle feeling", that covers things such as "used to cattle" or "love cattle", as can be seen from the following Table 6.6.2. Therein 'cattle-related' means: owning cattle, herding cattle, having herded cattle in the past, ownership of cattle in the past (self or family) and even being a butcher (seven times) because butchers have to be very easy-going with and knowledgeable about cattle. They need cattle and therefore cattle grazing space.

Table 6.6.2 *Cattle relations versus opinion about pasture* (n = 172; 21 x double opinions, 2 x three opinions).

	Totally agreed	Agreed, diff. form	No opinion	Against, no need	Against, inequality	Against, no land	Total for	Total against
Cattle-related	24	16	5	14	12	2	40	28
Rest	33	26	11	36	10	9	57	55

The ratios show a slight influence of 'cattle feeling' in the direction of promotion of the pasture: 40 people with 'cattle feeling' support the pasture with 28 against (ratio is 1.5). On the other hand, non cattle-related people generate a lower ratio of 57:55 (= 1.1), although the relationship is not significant ($\chi^2 = 0.8$ with a test statistic of 3.84). Some hint of an explanation of the conflict may be in evidence here, but only in a very general sense. Cattle feeling may create certain tendencies to assume positions, but obviously that alone does not explain why people resort to violence.

Population density

The whole village of Dzambou has a low population density. Certain sub-neighbourhoods may have a higher number of inhabitants, and others more extended fallow fields around the compounds, but because everybody can leave the surface of his direct living neighbourhood to cultivate or herd elsewhere, population densities per neighbourhood are irrelevant. Indeed, the inhabitants of the Fulbe settlement live closer to each other than those of Tndmou, but they have the same possibilities to rent fields in Dzambou Centre or even in Oudava, to fall back on forefathers' fields in Sir or buy land outside the traditional pasture boundaries.

There are even inhabitants that express their doubts about a population increase. Some areas of the village have experienced a decline. People mention the high death rate of both children and grown-ups and point to the remains of houses that have become empty. For them these are not signs of households moving from one place to another, but of the disappearance of whole families. However, among those that notice such reductions in the number of inhabitants there is no difference between those who are for or against the pasture area. On the one hand, people do not see any need for pasture land in view of the existing abundance of land on which to graze cattle. On the other hand, they highlight the necessity of the existence of big trees. "If you change the pasture forest area every now and again, trees never have the chance to grow. And big trees attract rain!" some say.

6.6.2 Human domain

Health

No specific health characteristics are evident among those who decided that pasture is necessary. Even those who actively promote the pasture area, those who have done so over the last years and those who are involved in the protection thereof (almost all inhabitants of the Fulbe-settlement) are no more healthier, younger or older than the average Dzambou inhabitant. Apart from the water well in the Fulbe neighbourhood, that was dug almost a generation ago, this neighbourhood does not and has not invested more (or less) in the health of its inhabitants.

Education

Taking account of all the pasture proponents, the level of education is more or less the same as the Dzambou mean. Also the number of people that send their children to school does not differ from the rest of Dzambou. However, the level of education of the Fulbe settlement inhabitants is below village mean (only four people attended primary school for some years). Moreover, the number of school-going children is lower there not only because of the fact that Islamic children in rural areas of Cameroon are generally less literate (they attend their Koran schools in the settlements), but also because the settlement is really a long way from every primary school in the region. In short, the Fulbe settlement inhabitants exhibit the general Fulbe habits with regard to education (see further section 6.6.4).

6.6.3 Economic domain

There is some difference between those people from Dzambou who (more or less) actively promote the pasture, those who are not against it (but only expressed being supportive when asked) and those who oppose it. Some of the Fulbe neighbourhood inhabitants cultivate so many cash crops (or a cereals-surplus) that they can acquire a good additional

income by selling[101]. The option to gain money through activities other than agricultural ones is evenly divided over the groups. Of the people that actively promote the pasture reserve some work as miller, some as small scale trader and some as a cattle trader or butcher.

The wealth situation is diverse, with differences between the different groups if one examines the TLU, ploughs and other utensils such as bicycles, generators, motor bicycles, etc. (see Table 6.6.3). In particular, the active promoters seem to be wealthier than the rest of the village members. For the largest part, this wealth is in the hands of three persons. Two of them are Fulbe, who are real cattle keepers like their ancestors and the third is a Kapsiki cattle owner, who is also interested in agriculture and therefore also owns a plough. However, even if the Fulbe, as strict cattle keepers, are not counted, the mean TLU of this group is high. It is possible to say that at least for this group the interest in the pasture reserve has grown due to their wealth and their access to livestock.

Table 6.6.3 *Wealth position of groups of inhabitants with a certain opinion (activity) vis-à-vis the creation of the pasture reserve*

Owner-ship	Active promotion of pasture	Non-active, unrestricted pro-pasture	Pro-pasture, with some restrictions (non-active)	Active promotion with restrictions	No opinion	Both pro- and contra pasture[b]	Contra pasture
N	18	34	27	12	16	10	63
Ploughs (% of group)	35	15	18	75	8	60	18
TLU (mean)	10[a]	4.8	2.3	2.2	2.0	3.1	3.4
Other utensils (% of group)	6	9	8	1	9	11	10

[a] = If the two big Fulbe cattle keepers are not counted, the mean TLU diminishes to 5.9
[b] = Wanting a pasture-reserve, but not in Baba Deli

6.6.4 Social domain

Family and friends

Not only the Fulbe settlement is inhabited by brothers and sons of only several families (and thus has a high internal link), but also the rest of the Baba Deli neighbourhood consists of the offspring of certain forefathers (although relatively more forefathers than in the Fulbe area). They experience stronger ties with the co-inhabitants of their neighbourhood than with the rest of Dzambou and even feel closely related to Oudava, the neighbouring village. For that reason they are inclined to let go quicker of their own wishes to support their "own" Fulbe, and to oppose "those people from Dzambou Centre"[102].

Political factors

Connections with higher authorities may be felt more strongly by the Islamic inhabitants of

[101] Other residents of Dzambou explain that this is obviously due to the high fertility of the Fulbe-neighbourhood fields. This gives rise to the jealousy and the feeling of unequal possibilities.

[102] When I announced that I wanted to stay in the other neighbourhood to improve my research possibilities, Baba Deli inhabitants even warned me that the Dzambou-ers (as they call them) would not be as co-operative as they themselves had been.

Dzambou because of the Islamic faith of the district chief. In land matters the *lamido* is perhaps more important than the sub-prefect. In addition, sub-prefects tend to disappear every now and again because they are regularly transferred to other departments. Building personal linkages with such officials is more difficult and less rewarding. Thus, in spite of the fact that the sub-prefect is a Christian, Christians do not feel more linked to him than to other officials.

In general the claim of the pro-pasture villagers corresponds with the viewpoint of the State. The pasture proponents indeed use this argument to underpin their interests. They refer to the importance of creating the pasture area using the same arguments as the State representatives while at the same time showing their 'good citizenship'.

Conflict mediation

As in all villages of Kapsiki, the neighbourhood chief is the first to intervene when problems between inhabitants arise. This is also the case in the Fulbe hamlet. When, however, discords with other neighbourhoods occur, *lawan* Yaya is not the first to be involved, nor is the general Dzambou village chief trusted by the Fulbe settlement inhabitants. For example, in case of damage to fields by cattle owned by inhabitants of another neighbourhood, farmers and cattle keepers find a solution themselves or they approach higher authorities. Mostly they refer to the line officials of the agricultural or animal husbandry services. As regards cattle keepers, it is important to claim that the 'pasture' area is indeed pasture area (and to have that claim acknowledged) because all fields that lie in a 'grazing only area' are cultivated subject to the risk of crop damage by cattle being solely for the cultivator. The owner of the trespassing cattle has no responsibility and no obligation to reimburse the damage. The fact is that the cattle are not trespassing, but rather the cultivator. The officials are then left to declare that the field concerned lies inside or outside the boundaries of the reserve. This is one of the important reasons why people are for or against the delineation of the pasture. Cattle keepers or herders want to have clear boundaries, so they need not negotiate the position of damaged fields over and over again.

Land allocation

On the whole, the proponents of the pasture are subject to the same rules as all other inhabitants of Dzambou as far as land allocation is concerned. However, the Fulbe neighbourhood acts a bit differently within their settlement boundaries. Apart from denying everyone, including themselves, the right to use fields in the (newly delineated) pasture, they themselves manage the Fulbe pasture corner. The first clearer rules do not apply here. Other Baba Deli farmers, who claim to have rights because of their forefathers' activities, are ignored. At best the settlers declare that they do not know who the owner is, or that the State owns everything. They use the fields surrounding their compounds and when new settlers arrive it is the *lawan*, Yaya, who decides over the location of the compound and fields.

He was not the first to arrive and to build his house, but he was the last of a first group. Moreover, he managed to persuade the district and sub-department authorities decades ago to appoint him neighbourhood chief. His father cleared a lot of fields in the region (from Tchibi to Oudava), including fields within the pasture area. As a result and because of his connection with the original cattle keepers (*Elhadji* Ardo and his fellow-men) and because Yaya himself was imprisoned once for only looking at the ruins of his fathers house in the middle of the pas-

ture area, he is adamant that the pasture area should be used as grazing land. He considers himself to be the person who has legitimacy to allocate fields in the 'Fulbe' Baba Deli region, and to guard the pasture against intruders[103].

Cultural factors

To decide whether pro-pasture opinions are related to cultural characteristics such as religion, in Table 6.6.4 a comparison is made between people's different religions and their places of residence versus their opinions concerning the pasture. The group 'some Muslims in neighbouring villages' has been added as a correction for the very small number of Muslims in the rest of the village of Dzambou. Neighbouring villages, such as Oudava (see Figure 6.3) are heavily involved in the pasture discussion. Their inhabitants have or use fields there or own cattle which they (may) herd there.

Table 6.6.4 *Numbers of Muslims, animists and Christians living within or outside the "Fulbe settlement" and their opinions about the pasture reserve* (n = 180; there are 21 x double-opinion, 2 x three opinions)

	Totally agreed	Agreed diff. form	No opinion	Against, no need	Against, inequality	Against, no land	Total for	Total contra
Muslims in F-corner	13	2	0	0	1	0	15	1
Muslims outside F-corner	3	5	1	2	2	0	8	4
Muslims in neigh-bouring villages	2	1	2	3	2	1	3	6
Animists within F-corner	0	0	1	0	0	1	0	1
Animists outside F-corner	28	27	12	29	14	6	55	49
Christians outside F-corner	13	8	2	18	5	4	21	27
No religion	0	0	0	1	0	0	0	1
total	59	43	18	53	24	12	102	89

Table 6.6.4 shows that opinions are evenly divided between the adherents of non-Muslim religions (pro : contra = 77 : 78). On the other hand, counting all the Muslims together seems to reveal that the Islamic religion is a strong factor that makes people opt to support the reserve idea (26 out of 37 people: $\chi^2 = 4.8$, significant)[104]. However, dividing the data according to place of residence shows that (almost) all Muslims from within the Fulbe-settlement think positively concerning the grazing zone (15 out of 16 persons). The opinions of Muslims outside that settlement are more or less evenly divided between pro and contra, as with the other religions. Thus, the fact that the Muslims of the Fulbe settlement are in favour of the pasture area cannot be fully traced back to their religion. When calculating the influence of religion in general, on a pro or contra opinion, it seems as if it has more to do with a combination of religion and the place of residence.

[103] With his invalid foot and with his increasing age, he has now delegated this last task to some of his subjects ("with the approval of the authorities", the 'Fulbe' claim).

[104] Calculating the influence of animism or Christianity versus all other religions shows no significance (the χ^2 being 0.09 and 2.8 respectively; test statistic is 3.84). However, the influence of religion in general on the opinions for or against the pasture reserve is significant ($\chi^2 = 6.04$ with a test statistic of 5.99): the Muslim effect.

An explanation for the 'place-of-residence' influence can be sought in the ideas and perceptions of the inhabitants, and are grounded in social capital considerations. Perhaps they have realised that behaving as a protagonist of cattle-keeping and pastures, not only by expressing pro-pasture feelings but also by behaving as guardians over it, together with their belonging to the Islamic community, will make them allies of the powerful *lamido* of the district[105] who is himself a Muslim and cattle keeper. In fact the few original Fulbe that live in the village have their compounds in the Fulbe settlement. The oldest Muslim Kapsiki of that neighbourhood started to live there in the time that the big Fulbe cattle keepers, such as Elhadji Ardo, herded their cattle there and sometimes even had a small house in the same corner. The bonds of the inhabitants of the Fulbe settlement with the Islam and the Fulbe perhaps make them seek to strengthen the link with the Islamic authorities. Those Muslims of Baba Deli (four households heads), who do not live in the Fulbe settlement, strongly oppose the reserve due to inequality reasons. They do not have linkages with the Fulbe *lamido* of the district by way of an appointed *lawan*, like the Fulbe neighbourhood has.

On the other hand, those non-Muslim farmers of Baba Deli that agree with the pasture do not do that based on an kind of ethnic feeling of "we Muslims", as is suggested applies to the Fulbe neighbourhood inhabitants. The region of residence and direction of origin (see Fig 6.3) seem to be more important.

Discords and claims

According to those Dzambou residents that support the creation of the pasture zone, the agreement between *Elhadji* Ardo (and his fellow herders) and the then farmers of the Baba Deli grazing zone was meant to be 'forever'. They say that he confirmed this agreement with the authorities the moment some discords broke out between the herders and a farmer. Ardo paid the department authorities for the pasture and with that made it 'his' 'forever'[106].

The inhabitants from the Fulbe neighbourhood started to acknowledge the risk of a disappearance of the bush during the increase in bush encroachment by farmers some ten years ago. They started to tell new cultivators to stay away from this area to safeguard the possibilities to graze cattle. When the cultivators continued clearing the fields that their ancestors had first cleared 80 to 60 years ago, the cattle owners of the Fulbe settlement tried to mobilise the authorities, asking for a re-establishment of old limits. Indeed, reacting to the then *status quo*, some eight years ago a former sub-department chief pointed out certain small roads or riverbeds as the boundaries that should not be crossed in order to cultivate. But also at that time the Fulbe neighbourhood was left in peace (see Fig 6.5). Yet, the pasture was not fully protected. Although the agricultural population did not openly resist the decision or attack the cattle owners, in their perceived role as instigators of the (then) new delineation, they still felled the trees, cleared parts of this bush and started fields. Every now and again, disputes arose between the two different users of the area.

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[105] See Chapter 4 about regional 'traditional' chiefs (*lamibe*). The *lamido* of Mogodé, although Islamic, is not a Fulbe in the strict sense because he is of Kapsiki descent. Being from the noblemen's lineage (see Van Beek 1978; 1987), he acquired his position with the help of a wealthy brother, after the former *lamido* died.

[106] Some respondents claim that he paid a considerable amount of money to the prefect of the department. One respondent says that he claimed back his "forty cattle" because "he would leave the area" only then.

On the basis of the current delineation, the dispute about the boundaries flared up again. However, the inhabitants of the Fulbe neighbourhood, who are being threatened, renounce the accusations. In addition, they claim not to understand their fellow villagers' complaints about a diminishing of the pasture area now Ardo's boundaries are not adhered to in the Fulbe neighbourhood. With the current delineation of the pasture, they say, the surface of the reserve is now not smaller than it was in Ardo's time. Although the authorities left the Fulbe neighbourhood in peace ("What else could they do? Where else could we live?"), on the other side of the pasture they took several fields out of production and added that area to the reserve. They explain that by doing so the authorities extended the reserve on the north-west side beyond the original boundaries that applied in Ardo's time (see Fig. 6.5).

The Fulbe-Kapsiki claim that they started to live in their corner with Ardo's consent. Some of them first had houses in the middle of the pasture, or at least on the inner sides of large boundary rivers, but they retreated according to Ardo's wishes. This is how they explain the legitimacy of their settlement.

The fact that the inhabitants of the Fulbe settlement are not opposed to the pasture can be explained by the fact that their fields are not situated in the current pasture reserve or, if they are, that they have other possibilities at their disposal both in the hamlet and in the rest of the village. Table 6.6.5 shows the relationship between their opinions about the pasture and the location of the fields.

Table 6.6.5 *Opinion of Inhabitants of Fulbe settlement related to the position of their fields* (n = 18; 2 non-Muslim)

	Totally agreed	Agreed, diff. form	No opinion	Against, no need	Against, inequality	Against, no other land	Total
In reserve only	0	0	0	0	0	0	0
In reserve. + outside past.	0	0	0	0	0	1	1
In Fulbe corner only	4	0	0	0	0	0	4
In Fulbe-corner + reserve	0	0	0	0	0	0	0
In Fulbe-corner + outside past.	3	1	1	0	0	0	5
Fulbe-corner + reserve + outside past.	5	0	0	0	0	0	5
Outside pasture	1	1	0	0	1	0	3
Total	13	2	1	0	1	1	18

Four Muslim households of the Fulbe settlement depend for their agricultural fields on the original pasture area, that is, the zone of their settlement. They took a big risk when they asked the authorities to delineate. The decision of those in charge to leave the Fulbe settlement out of the new pasture must have been a huge relief. Also for those with other fields losing their fields in the settlement area would have been a major loss because this former pasture area is very fertile. In that respect, accusations by some village inhabitants referring to bribery, i.e. paying the authorities to leave the Fulbe settlement out of the reserve, are understandable.

6.7 Violence: Box 4

The future development of the conflict depends on the reactions of the two parties. Yet, in this specific case, in addition to the different groups of Kapsiki, the State is also party to the conflict. However, as yet, the threat of violence does not exist between Kapsiki and the State. Even though some of the Kapsiki feel angry towards the State, they voice their anger against their co-villagers whom they accuse of instigating the whole problem.

6.7.1 The use of force

Contending: the use of threats

To achieve their aims without any eye for the interests of the other party, the people who are against the pasture may opt for some kind of action to reverse its existence. They threaten with three possible courses of action concerning the invasion of the area and the continuation of agriculture. The first involves approving that others carry out the invasion (most people with this idea think the pasture is unnecessary). The second is to invade oneself and the third is to organise a group invasion to prevent a possible arrest by the police. Furthermore, the organisation of a group can serve to convince the authorities to change their decision (whether or not with the aid of bribes). Next, it can serve the aim of co-operation against the Fulbe hamlet inhabitants. The continuation of cultivation in the pasture area can also be performed personally but understandably with less success. Personal or group-based invasion of the pasture is considered by those who regard the pasture as a violation of the rights of cultivators because of the unequal treatment of different farmers and because some do not have enough fertile soil elsewhere.

During the year of the delineation they still had permission to finish their production because they had already started (says the sub-prefect)[107]. Rumours about this permission differ. According to some cultivators, the only reason was a political one. During that election year, the RDPC authorities tried to win enough votes in this UNDP stronghold and bought votes by promising to grant permission to cultivate. Some say they even promised permission that cultivation could be continued into the next year. Others say they never heard anything about voting for the RDPC, saying that they received this permission because they could not possibly go to other fields that they had not prepared thoroughly. According to the sub-prefect, use was limited to those who had prepared the soil and had no other options and they were to prevent cattle damage in their fields by making fences (using prickly bushes). If such damage were to occur, nonetheless, reimbursement would not be obligatory.

Contending: the use of violence

During the delineation meeting in Baba Deli another option came to light, namely the use of violence. When talking about the fight afterwards and comparing the members of the two fighting groups with the different opinions concerning the pasture, those that confess that they used violence mostly expressed that they were upset by the unequal treatment of inhabitants. In the whole village, 22 people support this opinion. From the tables in the rest of this chap-

[107] The first meeting to announce the coming delineation was held in mid March. Apart from the felling of trees (sometimes already done years ago), the production season could not possibly have been started then.

ter, one can deduce that of all the people who contest the pasture because they feel it is an injustice, most have no cattle (17 people out of 22) and only one third (7 people) have fields in the pasture[108]. These seven people in particular feel the injustice most. Only eleven people in the whole village stated that they have no fertile land at all. Eight of them have fields in the pasture and declared that their other fields are not fertile. None of them have cattle.

The personal combination of 'having thought of action' with 'feeling injustice or a lack of fertile land' can clearly lead to violence in the future. The trigger will therefore not be an activity by the authorities, such as the placing of border poles, but rather controversies in the pasture itself such as when pro-pasture adherents (especially those who appointed themselves as pasture guards) catch other people red-handed, when they are busy destroying boundary poles, or when crop damage is caused by herds in the grazing reserve, where now no compensation is due. This latter possibility is especially dangerous in the event of group action. The formation of groups can even have the goal of scaring away cattle owners. All these actions depend on the judgement of readiness of the authorities to intervene. At the moment, like the presence of authorities in the case of cattle theft, this readiness is thought to be low. The pro-pasture inhabitants of the Fulbe hamlet, in particular, are trying to involve the authorities more (see section 6.6). The other important parameter is the possibility of finding allies in the group formation.

6.7.2 Escapes: can violence be avoided?

Yielding

Yielding means that farmers who want to use fields in the pasture area do not stick to their wishes. They give in to the authorities and to their pro-pasture fellow villagers. More specifically, they leave the Fulbe Kapsiki of Baba Deli neighbourhood in peace. They allow them not only to live in the pasture corner, which they believe should have been forbidden, but also allow them to cultivate the fields there.

Under pressure from the authorities, and especially the police force, there is a considerable chance that Dzambou villagers will yield and agree to the pasture area as such. In addition, no-one wants a repeat of the violence experienced in the past. Although Kapsiki are not afraid of expressing their disagreements with a lot of yelling, threats and mutual pushing, the small fight at the boundary meeting has already gone further than the physical expression of discords which is normally allowed[109]. However, the inequality of the situation continues to be a problem and as long as that is not solved the risk of irritations (even over other issues) and violence will grow.

Problem solving

With an eye on all parties' interests, something impossible has to be achieved. The problem is not only a pasture versus fields conflict but also, as far as authorities are concerned, the preservation of a forest zone. The proposed pasture rotation, as was agreed between farmers and former cattle keepers (according to some villagers), would serve the goals of both user groups, but not that of the State. For the farmers this would have been an ideal solution. They would

[108] Of a total of eleven people with fields in the pasture.

[109] My experience is that, in a tense situation, other people present (also or even especially women) intervene quickly and keep aggressors physically away from each other, trying to calm down the dispute in the meantime.

have had access to the most fertile fields in the region and at the same time their exhausted fields would have been rendered more fertile with new manure. According to them, the cattle keepers should have been satisfied with this construction. The rest of the village offers enough fallow to serve as grazing land for the small amount of cattle owned by the villagers and for visiting herds. In addition, the current field area is closer to water wells than the pasture zone itself. The plans to build a new dam somewhere between Dzambou Centre and Oudava should have made the fallow fields even more attractive.

On the other hand, a fixed pasture reserve, which is at the same time forest, would serve State and cattle keepers' aims well as long as the number of cattle is restricted to the carrying capacity of the region. This is a condition that could certainly be met for the time being, given the relatively small number of cattle. However, the implementation of such a plan would be detrimental to the farmers who lack fertile fields. They would have to be compensated in cash or otherwise. Cash would mean that they are able to buy cattle themselves or chemical fertilisers to enhance the fertility of their current fields. Some other compensation would mean the same, if this was also in the form of cattle or fertilisers. Cash compensation would also give them the possibility to choose other options, like trade, in order to reduce their dependence on their fields. In the longer run this would be preferable.

The compensation prescribed by law should be paid without delay and without restrictions. The traditional Kapsiki rule of 'owners are those who cleared or inherited cleared fields' is a better starting point to help families overcome field infertility and insecurity, and thus to prevent the build up of frustration and aggression.

Some farmers have said that they would accept the pasture if the cattle keepers were more willing to share their cattle's manure with field owners in the rest of the village. Whether or not this is possible to organise and implement remains to be seen, but it is certainly something worth talking about.

The problem of perceived inequality has to be addressed immediately. As long as people think that some are allowed to cultivate in the pasture area, they will do the same. This will definitely lead to clashes between the users or with the police and the conflict will escalate as a result. The Fulbe-Kapsiki of Baba Deli are now benefiting in two ways. Firstly, they have their pasture reserve and secondly, they have their fertile pasture fields (in their corner). Some of them have indicated that they are willing to move, if there is a place to go to. The problem could be solved with help from the authorities with a view to organising that or with a view to organising the communal use of the now privately used pasture corner. It should be remembered, though, that the Fulbe settlement corner is not big enough to provide fields for all families that lose pasture fields now. Therefore, without measures to improve the fertility of the rest of the fields, several families will continue to suffer from a decline in production.

7

Kubadje or Jiksa: contesting names, contesting claims

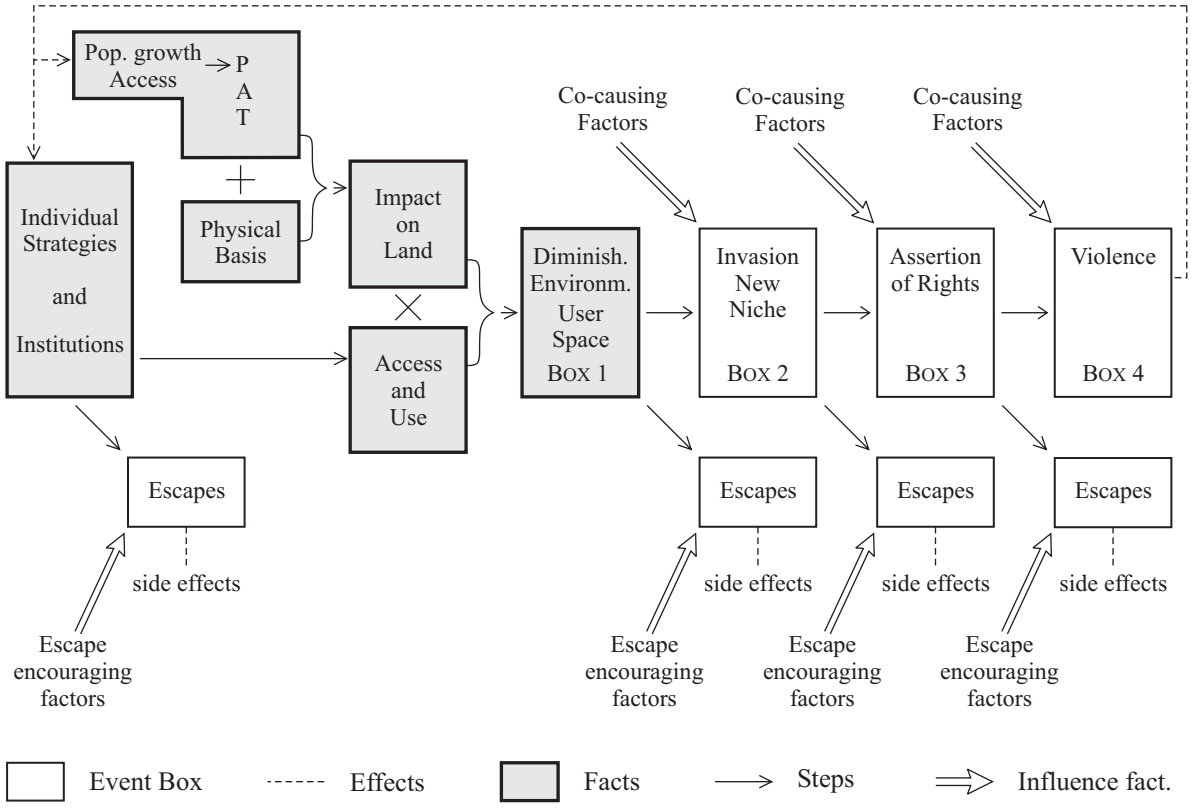
While climbing the hill to reach a point from which he can show me the natural boundaries of the grazing area of his clan, the Fulbe Prince encounters yelling and cursing bush-clearers who swear at him (*and* me). "You and your filthy fellow-Fulbe will not make it here any longer! Go away! This white woman that you brought will not make any difference. This is our land, and we will use it. If you do not go voluntarily, we will chase you away. We are stronger than you and have many arms!"

Since the mid 1980s, the small bush region on the border between the villages of Kila and Oudda which are, respectively, in the two sub-departments of Mogodé and Bourah (see Figure 7.2) has been a contested area. Until then, the savannah forest was used by a group of sedentary cattle-owners to graze their herds. The men of this Fulbe group leave their 'Kubadje' area in the dry season when the water wells for their animals run dry and fodder becomes scarce. Currently, a second group wants to make use of the land, namely Bana agriculturalists from surrounding villages who invade the area and start clearing fields in what they call 'Jiksa'. Unfortunately, these fields coincide in time and space with the cattle pastures within the small region itself and with the corridors to the larger adjacent bush land of Modélé. This means that direct confrontation between the two user groups cannot be avoided and that the conflict is growing. Some small clashes have already taken place and the risk of violence on a larger scale is increasing.

In this chapter I focus on the explanation of this conflict, following the VoE model of Chapter 2 (Figure 7.1). Thus, after some historical information, which is important to understand the influencing factors later, I start by investigating insecurities in the agricultural village. In the third section I explore the different options of the invading group as regards improving their situation. Thereafter I focus on the specific investment described in Box 2 of the diagram: the intrusion into another niche. The fifth section describes the claims of the Bana to the new area. Subsequently, in order to pinpoint the conflict (Box 3 of the diagram) the focus is on the opposing party. Their insecurities, their options for overcoming these, and their claims are described

in section 7.6. I end this chapter with a description of options and motivations of both parties to resort to, or abstain from, violence (Box 4 of the VoE model).

Figure 7.1 VoE diagram

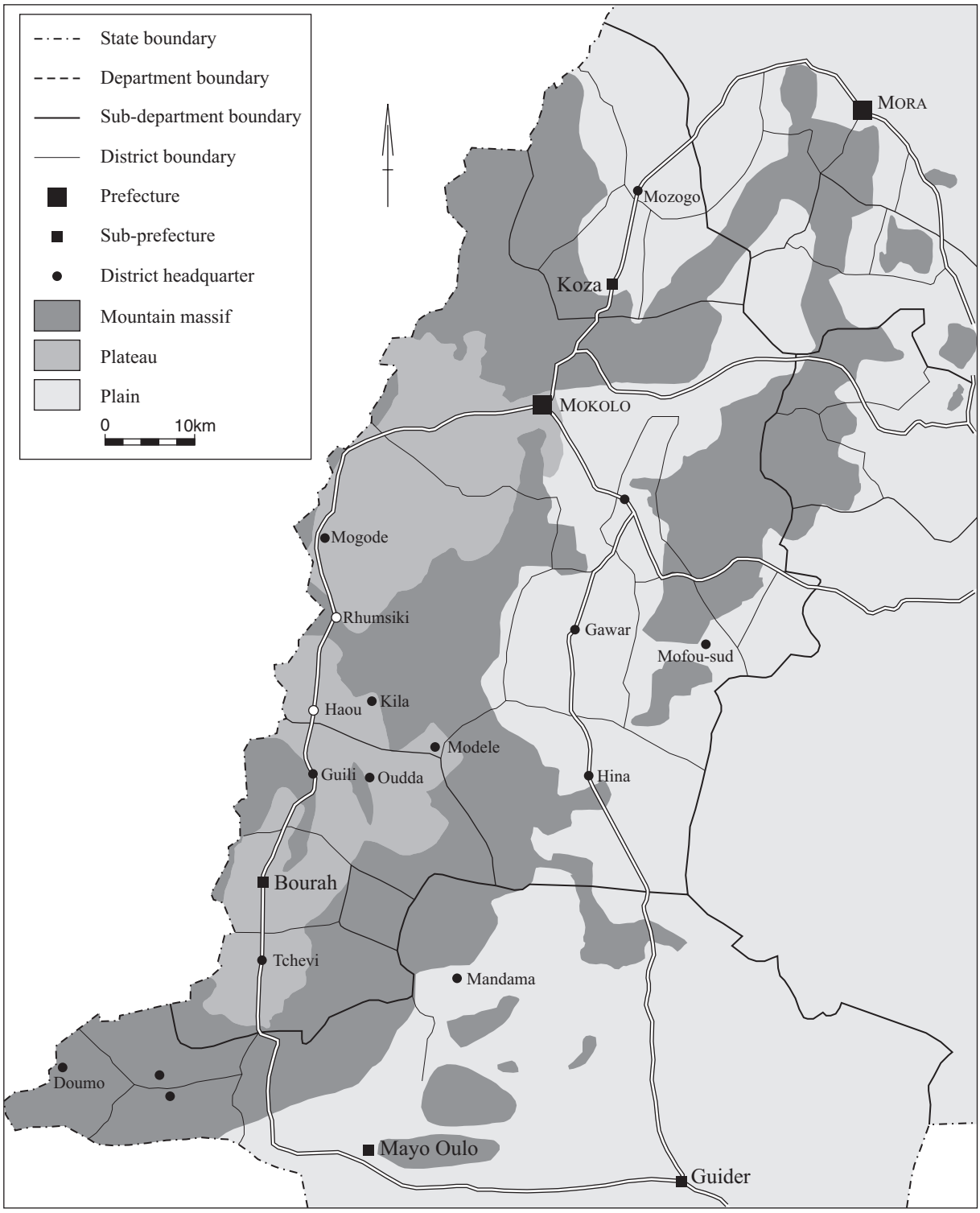


7.1 Background: History of the region

The middle ranges of the Mandara Mountains of Mayo Tsanaga department are inhabited by the Kapsiki and the Bana. These two ethnic groups are more or less related. For example, linguists point out the similarities of their languages (Lebeuf 1961; Wente-Lukas 1978)[1]. Their cultures also show many similarities. Both the Kapsiki and Bana societies are divided into two classes, namely the blacksmiths who, because of their role as undertakers (with both ritual and practical functions), form the lowest class and the so called 'normal people' who may be artisans, peasants (mostly) or even small traders. The blacksmiths are involved in the making of iron tools, like knives and heels, in (ritual) music making, medical care and medicine production and in divination ceremonies, of which the 'reading of the crab' is the most important. Blacksmiths' wives have a special role in the production of pottery[2]. Originally the Kapsiki and Bana were 'animists'. They believe that each thing, animal and person 'has' a kind of

[1] Wente-Lukas (1978, Abstract): *"...Juengste sprachlicheUntersuchungen haben gezeigt das die Bana mit einer anderen, groesseren Gruppe, den Kapsiki, historisch verwant sind. Ohne Zweifel ist die dem Bana – und wohl auch benachbarten Sprachen wie dem Kapsiki und Higi – eigentumliche Ausdrucksweise der spezifischen Umwelt angepasst, in der es fuer die Bana zu leben und mit der es fertig zu werden gilt ..."*

Figure 7.2 *Mandara Mountain plateaux and research area*



[2] Source: Report of eldest woman in Oudda-Baliwol, Dzagni, about 106 years of age at the moment of her interview with Moussa, August 1997 (College of Education-thesis of Moussa, one of the voluntary teachers in Oudda: "*L'Histoire de la vie de nos vieux racontée.*"); For the Kapsiki: see Van Beek (1978 and 1987).

godly creature in it, being more or less a personalised form of the one and only god, which they say is the same as the god of the Christians and Muslims. Nowadays, lots of people of both ethnic groups have converted to one of these religions.

Next to that, the bride-price customs are more or less the same, with a diminishing amount of payment over the years. Divorce is practised frequently in both societies. More than one person has been married over 10 times. Far more women leave their husbands to live with another man than vice-versa and they then leave their children with their fathers.

According to Boulet (1984: 138), both ethnic groups are descendents of the Mofu that migrated into the area in the 17th century from the Diamaré plain or even further away, such as the Logone[3]. They mixed with the then autochthonous population to form several new groups. Although the Bana admit that they arrived in the Mandara Mountains after the Kapsiki, they claim to have been the first to arrive in the current Oudda territory, including the now contested small bush area in the north. They also state that they arrived during the course of the seventeenth century and they, like Boulet, talk about origin places in the east. But according to them their place of origin was even further east, namely in the Sudan. They arrived in the Rhumsiki area after having relocated a number of times in the Mandara Mountains, partly due to locust plagues and partly due to violent encounters with other populations (for example on the current Nigerian border, the river Madagali). There they succeeded in reaching an agreement with the Kapsiki[4] already present. The Kapsiki were to stay on the adjacent plateau and the Bana were to occupy the neighbouring area of the mountains to the south that is now called the district of Guili.

One of the origin myths of the Bana states that Oudda itself was established by three different Bana men who, during the time of the arrivals[5], came to the region and settled on three different mountain tops. At night they saw each other's fire and, when meeting, decided to set up a village together. Over the course of several years, a real crowd of people from Rhumsiki arrived to join them. They built their houses and most of their fields on the mountain tops and slopes for safety[6], although from the beginning they had fields in the plains too. From the 1930s until well after independence, governments stimulated mountain people to descend and build their compounds in the more accessible plains. However, the hill-tops are where their common history is. The remains of houses and fields can be seen there and there are still burial places on the slopes.

Coming down from the slopes, people started to build their compounds in more or less concentrated settlements[7]. They wanted to be among others, to feel safe and to be able to guard against attacks by humans (sometimes thieves) and ravaging wild animals. After such a "plain-hamlet" had been founded, now and again they moved on to use fields further away. Only a

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3 See also chapter 6.

4 In general the more northern peoples arrived before the more southern ones (those in the sub-department of Bourah). In other words, the constant pressure from the northern Islamic empires made northern populations move to the south, in turn putting pressure on the autochthonous groups to move on.

5 Meaning during the second half of the seventeenth century.

6 Although not totally safe, the steep hills gave at least some protection against the slave raids of the surrounding Muslim empires, like that of Bornu and of Mandara between the 13th and 18th century, and of the Fulbe of Sokoto after the *jihad* of Ousman Dan Folio, in the 18th and 19th century.

7 In this, they differ from the Kapsiki who live further away from each other. The Bana have only very small fields in the direct vicinity of their compounds, so they can live closer to each other.

few daring people set up new homes in remote bush areas, sometimes as far north as what is now Jiksa area. Because of this settlement pattern Oudda is now spread over a wide area and consists of different neighbourhoods and sub-neighbourhoods (see Fig. 7.3)[8].

It was only several decades after the foundation of Oudda by the Bana that the Kapsiki started a settlement in the southern ranges of their plateau territory, north of where now the contested pasture is situated. According to Van Beek (1981:114-115) these Kapsiki did not move southward from the plateau. He sketches an origin somewhere to the south-west, in Nigeria. In line with Kapsiki customs this village, which is called Kila, stretches over a wide area and is divided into different, widely dispersed neighbourhoods, each with their own chiefs. Nowadays, one of these neighbourhoods is formed by the Fulbe area of "Kubadje"[9], the pasture area studied.

As explained in Chapter 4 the Fulbe arrived in the north of Cameroon at the beginning of the eighteenth century. At first they came with peaceful intentions, only in search of good pastures. Later, in the wake of their holy war, they antagonised the autochthonous population with their (accompanying) slave and harvest raids. In the Mandara Mountains the inhabitants fled to higher regions in an attempt to escape these raids. In those days the Fulbe did not settle in the mountains. Their elite, living in urban centres such as Mokolo, only invaded these areas from time to time to take slaves. Some lower classes rambled with their herds through plains and foothills and became settlers themselves. Others performed transhumance and lived in semi-permanent hamlets during the rainy season. One of the concentration areas of such Fulbe settlements could be found from Yola[10] to Garoua (see Fig. 4.1, Chapter 4).

For these Fulbe the Cameroon-Nigerian boundary did not mean anything. They were used to travelling to and fro between Garoua and Yola or from Maiduguri via Mokolo to Guider. The (semi-)settled Fulbe of Kubadje originated, several generations ago, from these surroundings of Garoua. The neighbourhood chief in charge during the research, *Elhadji* Ngoura, left that area when he was a young man and moved to the west, that is to Nigeria, where he married. But "when the Nigerian president expelled all foreigners"[11], he and his fellow Garoua-Fulbe and their families sought the neighbourhood of the regional Fulbe *lawan* of the study area, who at that time was settled in Modélé (see Fig. 7.2). Because of the population increase in Modélé, some of the Fulbe group - 6 family heads and their families - moved to the bush-land area of what is now called Kubadje. There they built their houses with the help of some

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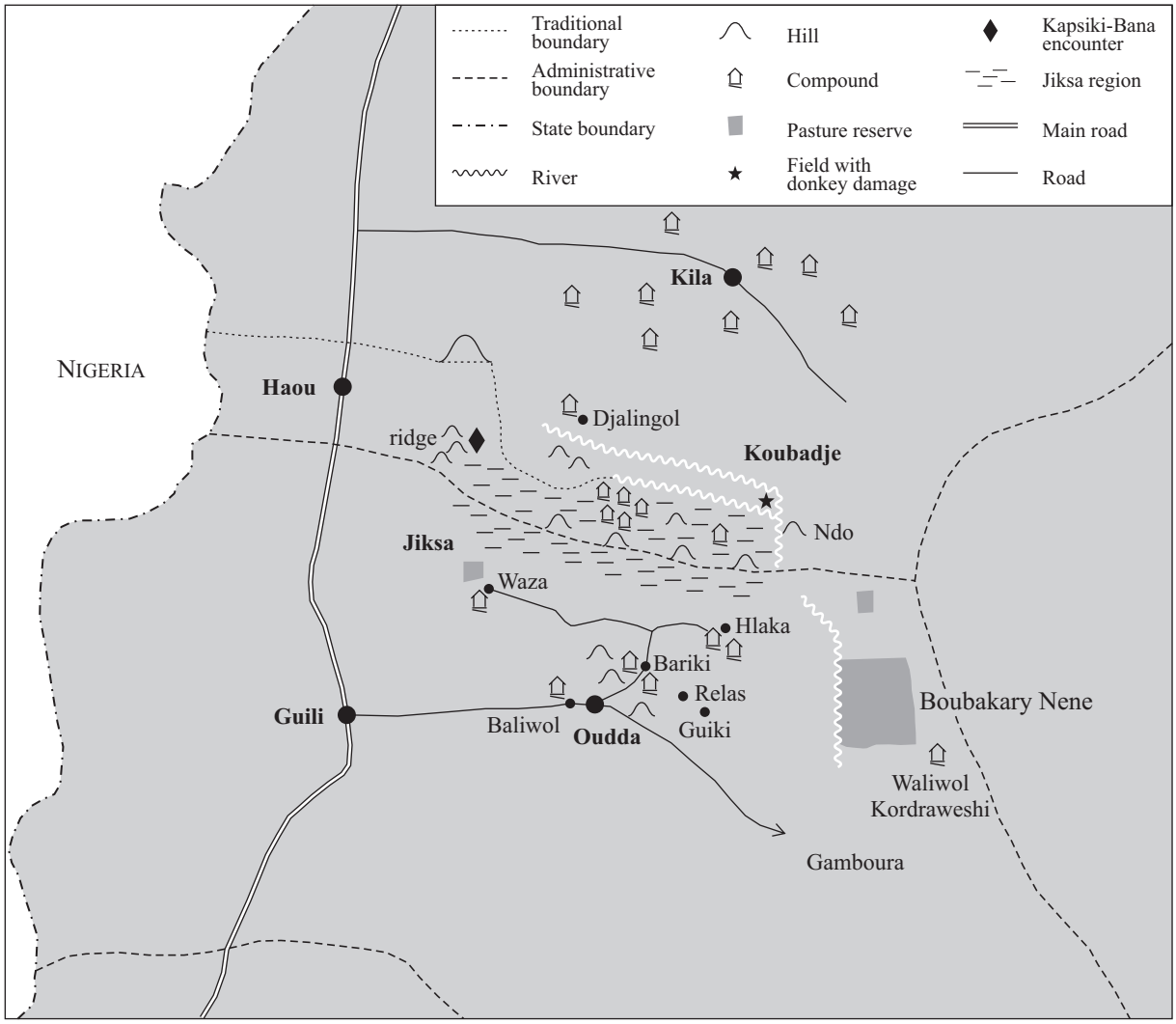
8 The neighbourhoods are (going from Guili along the road, further and further into the bush): Baliwol, with its sub-quarter Glke; Bariki (also called "centre") with its sub-quarters Relas and Guiki; Hlaka (with a high and a low lying sub-quarter); and Waza (a very small and very remote neighbourhood in the north-western direction).

9 The word 'Kubadje' is the Fulbe word for the shrub *Isoberlinea Doka* that can be found in abundance in the studied pasture area. In general this shrub denotes a degradation of pasture quality (Mvondo Awono *et al* (2001). Cattle do not eat the shiny, non-digestible leaves, but it is useful for fuel wood.

10 A kind of district (emirate) of the Fulbe Sokoto Caliphate, in what is now Nigeria.

11 *Elhadji* Ngoura refers to the Nigerian president *Elhadji* Shagari, who reigned from 1978-1983. It is difficult to define the period during which he expelled all foreigners from Nigeria. However, Ngoura seems to have arrived in Cameroon earlier than that. Perhaps he mixed different events and also refered to the political struggles connected to Nigerian independence and the preferred type of State in the 1950s. In that same period the emirs in the Northern region tried to purify their territory from foreign (for them meaning 'southern'), non-Muslim influences.

Figure 7.3 Oudda-Kila boundary: old and new visions



Kapsiki who were asked by the Kila village chief, Koye, to provide assistance. Ngoura himself arrived a bit later than the others in 1958[12], after a period spent in Modélé. Thus, he only became the leader of the settlement (‘*lawan*’) some years after the foundation at the request of the inhabitants of the time. He constructed his house – now a very big compound incorporating all his grown up and married sons and their families, as well as a sister, an adult nephew etc. - separate from the neighbourhood centre. Today these first settlers and their descendants stress the emptiness of the area on arrival: “only pasture land, no persons or houses.”

7.2 Insecurities: Box 1 and onwards

This section starts on the left-hand side of the VoE diagram (Figure 7.1) with a description of Box 1, the diminishing environmental space (scarcity) for the Bana. The step from Box 1 to

[12] Report of forest and hunting-chief of Mogodé, (*Chef de Poste Forestier et de Chasse* 2000) which corresponds with the life history of Ngoura himself (interview November 2000).

Box 2 is not only caused by environmental insecurities. It is a complex of personal, socio-political, economic and environmental factors and insecurities (see Chapter 3, Insecurity Complex) that shape the strategies of the Bana. These are the influencing factors, mentioned in the diagram, that decide whether or not the actors will enter into Box 2 or use an 'escape' route.

So, after a description of the environmental situation, I will examine the other (possible) insecurities of the Bana, in the human, economic and social domains.

7.2.1 Environmental insecurities

Physical basis

Soils

Because the Mandara Mountains form a volcanic range with soils consisting of partly weathered volcanic deposits (lithosols) one would think that the soils are fertile. However, this is not the case everywhere. The mountain plateau of the Kapsiki, for example, is less fertile than the eastern plains of the Diamaré and the area around Kaélé. On the other hand, the Bana have settled on pedologically better land than their northern neighbours, the Kapsiki (Mohammaddou 1984: 147).

The whole Mandara range has a basis of gneiss, anatexite and granite. This means rocks with a medium texture and a biotite and amphibole[13] varying content. Because of differences in local conditions of pedogenesis, alteration products, and thus intrinsic fertility parameters, differ per locality. In addition, simple rocks with a rough texture can be found that contain only a small amount of ferro-magnetic minerals. These soils weather into a very rough quartzite over time and that is not the best agricultural basis. The whole region is dominated by sandy soils, interspersed locally with some argilic soils or those which have planosolic properties (not very suitable for agriculture, because of water-impermeability), or which contain high levels of carbonates.

In Oudda, the extended village of the agriculturalists, the soil is skeletal with a lot of small stones and a large variation in the sandy fraction. The land consists mostly of régosolic[14] soils with washed aspects. The useable layers are not very deep and have deficient physical properties. The pedoclimate is dry, especially in eroded and furrowed regions. This type of soil has a high risk of erosion. According to Brabant and Gavaud (1985: *Carte des Terres*) these lands are only suitable for the maintenance of mountain agriculture and the production of subsistence crops.

In addition, soils of alluvial and colluvial origin, locally hydromorph, can be found that offer better agricultural possibilities. However, more to the south the soils contain increasingly less iron. Kila to the north has the same type of soils, although supplemented locally with soils with vertic properties which constitute good agricultural land.

Between Oudda and Kila, the area of the contested pasture, there is a wide pocket of very sandy soils which are deep and have a rough texture but which also have a dry pedoclimat. Water reserves in the soil are marginal. Like the other predominant soil type, these soils have a high erosion risk and deficient physical properties. Brabant and Gavaud (1985) consider

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[13] Biotite consists of an ion-rich mixture of, among others, potassium, magnesium, aluminium, Amphiboles are magnesium-ion silicates with traces of many other elements.

[14] A regosol is a type of azonal (with insufficient horizon development) soil consisting of shallow, medium- to fine-textured, unconsolidated parent material derived from freshly deposited alluvium or sands.

these soils suitable for forest and pastures, but only marginally suitable for other rain-fed agriculture[15].

In short, the soils of the Mandara Plateau are less fertile than might be expected. Where sand dominates, the production of sorghum becomes difficult. The large quantity of stones hinders cultivation and the high level of vulnerability to erosion and water shortage makes agriculture here a risky undertaking.

Climate

As explained in Chapter 4, their high altitude means the Mandara Mountains form a pocket of different temperature and precipitation conditions than their latitudinal position would suggest. A comparison between the two research areas situated at the same latitude (from approximately 10°15 to 10°25) reveals a 200 mm/year difference in rainfall. In the Bana district of Guili rainfall exceeded an average of 1000 mm/year over the last 50 years, compared to 800 mm in the Diamaré plain described in Chapter 5. The temperatures here are lower than in the plain: maximum temperatures are two degrees lower than in the study area of Chapter 5, while mean minimum temperatures are one degree less. In addition, diurnal temperature differences are higher outside the mountains. Despite the higher rainfall and lower temperatures, annual potential evaporation is still higher than precipitation.

Table 7.2.1 *Average annual rainfall per period* (in mm)

	1944 - 1969[a]	1960 - 1964[b]	1965 - 1969[b]	1970 - 1974[b]	1975 - 1979[b]	1980 - 1984[b]	1985 - 1989[b]	1990 - 1994[b]	1996 - 2000[c]
Mokolo	1035	1078.4	1080.1	962.1	1099.9	888.4	956.5	1112.8	n.av.
Mogodé	n.av.	n.av.	n.av.	n.av.[d]	n.av.[d]	n.av.[d]	n.av.[d]	n.av.[d]	926
Sir	1085	1054.2	1186.3	863.2	1138.1	1035.7	836.5	972.7	1113
Bourah	960	1092.1	1153.8	976.6	945.0	612.7	826.4	1061.7	1084

[a] = Data based on L'Hôte (2000). 1944 – 1969 data from Mogodé is not available because the Mogodé pluvio metric station only came into existence in 1970

[b] = Data based on Beauvillain (1995)

[c] = Data based on archives of pluviometric stations (copied January 2001)

[d] = Annual data is not available. L'Hôte (2000: 19) only gives a 25 year annual mean of 1030 mm

The actual rainfall patterns for the middle range of the Mandara Mountains are recorded in the lists of the different pluviometric stations in the region, as shown in Table 7.2.1. The monitoring centres of Bourah in the South, and Mogodé and Sir further north are the closest to the Oudda and Kila areas. It has to be underlined, however, that the real numbers in the study area may differ because of substantial differences in rainfall per locality, both in amount and over time.

Although many uncertainties exist with regard to the rainfall figures[16], and different authors give different numbers, in general it can be stated (and read from the Table) that precipitation

[15] CPCS calls this 'washed tropical soils with colluvial contributions, ferruginous', and FAO speaks of 'white and sandy luvisols' (Brabant and Gavaud 1985).

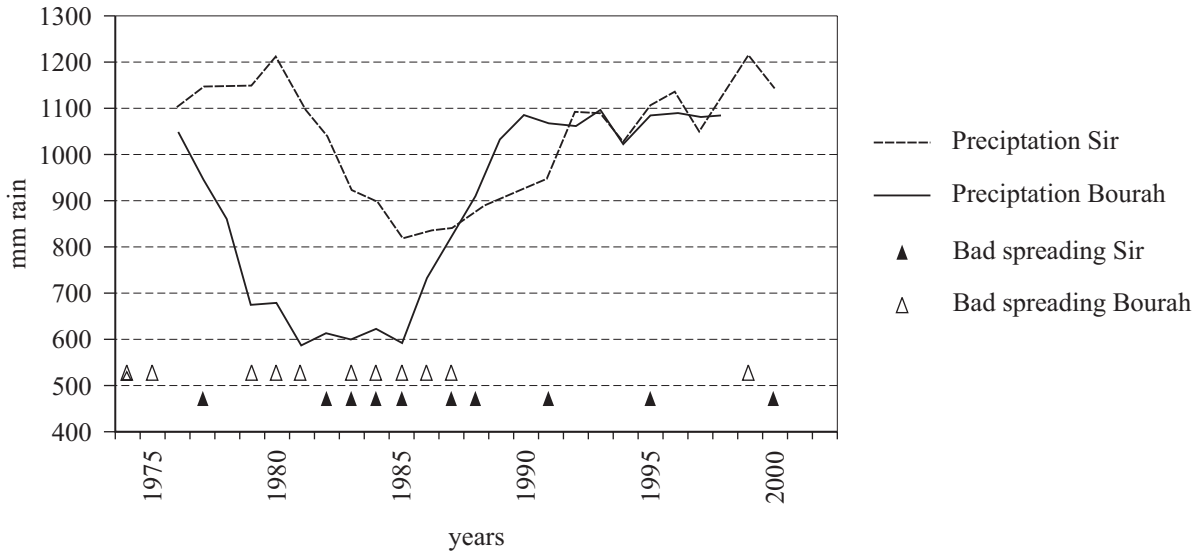
[16] For example Beauvillain (1995) notes a total lack of data for 1965, 1969, 1970 and 1972, and a lack of the August data in 1971 at the Bourah station. For Sir data are lacking for several months of 1960, 1967, 1968, 1973 and 1991.

diminished during the 1970s and 1980s due to droughts in the early years of these decades. In this period the decline in rain was especially concentrated in the two early months and the end months of the rainy season. That means that not only total precipitation diminished, but also that the cultivation period decreased, especially in the more important months of ploughing and sewing. Although this phenomenon was more obvious further north, Hallaire (1991: 20) states that several southern Mandara Mountains inhabitants changed their agricultural systems because of this precipitation insecurity. Indeed, several of my interviewees also stated that they had adopted the quicker maturing red sorghum species in stead of the white varieties that can only be harvested in December.

From the beginning of the '90s onwards the amount of rain increased. The five year mean from 1995 to 2000 was good in both the Bourah as well as the Mogodé districts, according to their pluviometric stations (see Table 7.2.1; and Table 1 and 2 in the Appendix).

However, insecurities did not disappear totally. The length of the rainy season in particular showed considerable variations. For the Kila-Oudda area, extrapolating from the data of the pluviometric stations north and south of it, most of the years in this period cannot be called 'secure'. In 1996, total rainfall stayed far below normal. 1999 and 1997 both revealed a shortening of the agricultural season because of a zero precipitation in April. In 1997 this cessation of rainfall came after a good start in March, so many of the farmers lost their first seeds. It is still very difficult for cultivators to anticipate the best moment to farm and to choose the best crop.

Figure 7.4 *4: Mobile average precipitation over 5 years in Sir (10° 34' N; 13° 40' E; 920m) and in Bourah (10° 15' N; 13° 31' E; 775m); plus years with bad spreading of rain for agriculture* (a dot means that in that year the rainy season was shorter than 5 months and/or there were fewer than 4 consecutive months with more than 100 mm of rain) (Source: Beauvillain (1995) and archives pluviometric station Bourah and Sir)



During the period between 1945 and 1955 - which is interesting for the cases studied - no data is available from the regional stations of Sir, Mogodé and Bourah. However, Beauvillain (1995: 74 and 72) shows that the Far North suffered lower long-term means precipitation during the 1940s and 1980s (Mokolo and Maroua data) and at the end of the 1950s, albeit a less dramatical one (see Figure 4.3).

In general the surface run-off of the region (from north of Mogodé) is southwards[17], which means that the rainfall pattern more to the north is important for the off-stream in the riverbeds of the research area (Olivry and Naah, 2000). The same applies to the filling of the aquifers in this Atlantic basin, although Detay (2000) stresses the fact that many aquifers in the southern Mandara Mountains are discontinuous.

In the Sudan-Sahel zone primary production figures, and the number of people that can live off the land in an area, are directly related to the availability of water. Those who depend on this harsh climate are fully aware of the dangers of a lack of water. Thus, apart from official precipitation figures and sub-surface water-content, the perception of actors of water availability is an important factor in their decisions.

Both the Bana and the Fulbe of Kila use the presence of the others in the studied neighbourhood as a reason to blame these people for the reduction in surface water, both as regards extent and duration of the flow. In the past the rivers were bigger, both groups claim. There were more small rivers and they lasted longer, namely until April while nowadays the water supplies have sometimes already run dry in December[18]. The clearance of the bush, the disappearance of trees and the exposure of bare ground to unlimited sunlight and wind causes more water evaporation and thus the drying up of more little streams and this all takes place earlier in the year than used to be the case when the bush was used only for pastoral activities, the herders say. On the other hand, the farmers highlight the influence of cattle. The trampling by the cattle and their eating of every little piece of grass means the soil cannot take up all the rain and the water runs off and disappears quickly. Both accusations are given meaning by the research of tropical culture technicians and environmentalists[19]. Also blame for the late-season bush fires, which damage either crops or pasture herbs, is placed by each of the parties on the other and is regarded as being devastating for the water availability.

The Fulbe from Oudda village also complain about the lack of water in the area: “When I was a boy we could stay all year round in this area, but nowadays the rivers run dry well before the end of the dry season.”, a 60 year old herder from the Guiki sub-neighbourhood of Oudda explained. They do not refer to the increase in the number of agricultural fields as a cause. They hope that the government will implement initiatives for the construction of dams in the two bigger rivers to make up for the water need, so that they no longer have to make the dangerous journey to Nigeria in the second half of the dry season.

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[17] For example, the river Louti, starting just north-west of Mokolo heads south till it reaches the Bénoue in the North Province. The first small currents of a river can be directed east or west, depending on the slopes of the mountains, but the bigger streams of this part of the Mandara Mountains are southward bound.

[18] It has to be stressed that there are some older Bana who explain the shorter duration of surface water in the area with a wider streambed of the rivers, due to water-erosion itself, and thus a quicker off-stream. Extension workers of the hydrology department try to encourage residents to build small dams in the streambeds to diminish the velocity of the current during the rainy season and to give the water more time to penetrate the soil and fill up the groundwater table (see also Hiol Hiol 1999).

[19] If the infiltration of water after a downpour is hampered by soil degradation and the disappearance of vegetation causes the rain to reach the ground more easily, the peak-flow in the rivers increases. The run-off in small rivers can take place so quickly that it seems as if those small rivers do not exist anymore. On the other hand, tree clearing and the exposure of bare soil and puddles to direct sunlight can cause more evaporation. Then the total amount of water in general and of water that can infiltrate the soil diminishes.

In short: the physical basis of the area consists of vulnerable, intrinsically not very fertile soils with a poor humidity regime. On the one hand, the amount of rain offers better opportunities than could be expected at this latitude of the Sudan-Sahel zone, but on the other hand rainfall patterns and water availability throughout the year are very variable and insecurity thereof has increased since the 1970s.

Population densities

The actual numbers and the growth of the population of Oudda can be estimated using various sources[20]. Counted against the (probable) surface of the area, this will result in population density figures, as shown in table 7.2.4.

Table 7.2.4 Surface and number of inhabitants over the years of Oudda and its neighbourhoods

	1940	1961-62	1970	1976	2000	Surface (in km^2)
Oudda(recently)[a]	2000	not available	2700	n.av.	a: 3,110 b: 3,863[21] (210 Fulbe)	a: 116 b: 147
Guili[b](Beauvillain)	5,933 (+ 35 Fulbe)	8,932 (+ 320 Fulbe)	n.av.	11,648	15,499[f] or 15,656	316
Oudda[c](calculated)	1,695 (+ 10 Fulbe)	2,460 (+ 91 Fulbe)	n.av.	3,185	n.av.	n.av.
Baliwol[d]	n.av.	n.av.	n.av.	n.av.	1,799	35
Bariki[d]	n.av.	n.av.	n.av.	n.av	1,026	22
Waza[e]	n.av.	n.av.	n.av.	n.av.	145	31
Hlaka[d]	n.av.	n.av.	n.av.	n.av.	893	25

[a] = figures are based on the data of two recent surveys, both held in 2000 (see note 20)
[b] = figures are based on the information of Beauvillain (1989: 590, 598)
[c] = figures are based on the Guili data of Beauvillain (see [b]), but extrapolated[22]
[d] = figures from "*Données de Base de Programme Nationale de Vulgarisation (2000)*"
[e] = figures are estimated, based on field visits and interviews December 2000, January 2001
[f] = 1987 (national) survey result, second number is estimated for 1996 (source: computer data of MIDIMA, January 2003)

From the table it can be seen that the population density of Oudda has risen from 13.6 people per km^2 in the 1940s to 26.3 people in the year 2000. Or, using the figures of Beauvillain (1989): from 11.6 people per km^2 in 1940 to 22.5 people[23] in the 1970s. That is an increase of around 100 %. However, there are big differences between the different neighbourhoods:

[20] *Délegué Zootechnique et Vétérinair de Guili*, "*Données de Base de Programme Nationale de Vulgarisation*", (2000); *Délegué d'Agriculture de Bourah , "Données de base de la zone Oudda*", (2000); Beauvillain (1989); interviews with informants of Oudda and Kila (Kubadje).

[21] The number of 3,110 people in 2000 suggests a decrease in the number of inhabitants since the end of the 1970s. Although this is possible, there are no obvious reasons in the history of the region to suspect such a decline, apart from stagnation in the 1980s as reported by Beauvillain. Therefore, it is more likely that the higher numbers of the Délegué d'Agriculture of Bourah are correct.

[22] The calculation of the Guili data has been made on the basis of a ratio of 3.5, although the surface ratio between Guili and Oudda is 2.7. The higher ratio is chosen because Guili is a town and we expect a higher population density there than in the village of Oudda.

Baliwol, Bariki and Hlaka have a higher population density (28.4; 27.8 and 28.7) than Waza (3.7). Moreover, it is not only the strict population density of a specific neighbourhood that shows the pressure on the land of that same neighbourhood. Oudda is perceived as one village and people also use the lands of that village in other neighbourhoods than the one they live in. The distribution is therefore uneven. The amount of surface used by people from one neighbourhood in the territory of another differs.

If we compare the densities of the two neighbourhoods nearest to the contested pasture area (Hlaka and Waza) with that of the rest of Oudda, it turns out that these two neighbourhoods that have the most and the fiercely expressed claims in the Kubadje-Jiksa area, have the lowest population density (see Table 7.2.5).

Table 7.2.5 Comparison of population densities in Oudda neighbourhoods

	Surface (km2)	Inhabitants	People /km2	No. of households[a]
Oudda total	147	3,863	26.3	651
Hlaka-Waza	56	833	14.9	139
Bariki total	22	1,026	46.7	181
Guiki	10	210	21	42
Baliwol	35	1,799	51.3	299

[a] = a Bana household comprises, on average, 3 adults and 3.2 children; a Fulbe household (in Guiki almost all inhabitants are Fulbe, plus a few Bana wives) consists of slightly less people (five on average)

Although population densities may constitute a source of insecurity for parts of Oudda, this is certainly not the case for the two 'outer-neighbourhoods', Hlaka and Waza.

Land availability

The availability of land to use for cultivation is diminishing. Whether or not the fields that former generations made available for agriculture are divided between the offspring or are still in the collective governance of the whole extended family, the fact is that these fields were once the property of just one person, to be used by him and his wife(s). But today they are used by two or more generations of offspring[24]. While the grandfathers' generation had an average of 3.8 sons that reached adulthood and the fathers' generations had an average of 4.5 sons that reached adulthood, this means that the fields cleared by the (great-)grandfathers nowadays have to be shared with 17.1 male family members (or their offspring). With a current mean number of wives per household head of 1.1, roughly the same number of women have to make use of these fields, compared with at best 2 in grandfather's time[25]. In short, the surface of

[23] The number of Fulbe in Oudda in 1976 is very roughly estimated as being 120 people (a sophisticated guess based on a figure somewhere between the numbers of 1961 and the actual numbers). According to Beauvillain (1989), in the Bourah department the population growth was 1 to 1.4 % between 1940 and 1976.

[24] Nine out of the 82 grandfathers not only cleared the bush but also (or only) inherited fields. In all the other cases the grandfathers were the ones who started to clear the bush in the Oudda territory (see section 7.2.4 "Land allocation"). In thirty-six cases, the respondents could not state the exact amount of ha their grandfathers had cleared. They only knew that it was "a lot" or "big fields".

[25] The number of wives that grandfathers had is not known. The number of wives of the father's generation is slightly higher than of the respondents' generation (mean 1.5). I therefore again assume a slightly higher mean for the grandfather's generation and estimate there to have been 2 wives per household head.

fields used by 3 people two generations ago has to be shared by at least 35.9 people today[26]. Furthermore, today's household heads point out that this number is set to grow again. Although most families are not yet complete (72 % of household heads-respondents is younger than 50 year), the mean number of sons is already more than one: namely 2.8.

Nevertheless, the Oudda territory is large. If all the land were to be usable, each person would have access to 3.8 ha (that is 22.8 ha per household with (a mean of) 6 people). This is far more than what is needed according to Dietz *et al* (2001: 198)[27]. However, because the area is a mountainous one, part of the Oudda surface is not available for agriculture and several areas are not even suitable for pasture. An estimation based on personal observation of these unusable areas, whose slopes are too steep, which are too rocky or which consists of a riverbed, excludes roughly 10 % of the area. That means that 3.4 ha are available per person or 20.5 ha per household. In 1940, this was still 6.6 ha and in 1970 4.9 ha per person.

Table 7.2.6 *Mean per person surface area of arable land (in 2000)*
over three generations; (as private property ('owned'), the available surface area of the total that is shared with the extended family, cropped and left fallow). All male respondents are household heads; females are mostly spouses, only 4 times household heads.

	Ha per man (n = 82)	Number of men that bought	Number of men that rented	Ha per woman (n = 43)	Number of women that bought	Number of women that rented
Respondent('owned')	3.6[a]	4	n.a.	0	0	n.a.
Respondent, part of shared[b]	2.3	n.a.	n.a.	0	n.a.	n.a.
Father (owned)	5.7[c]	3	0	0	0	n.a.
Fatherpart of shared	3.2	n.a.	n.a.	0	n.a.	n.a.
Grandfather(owned)	9.2[d]	1	0	0	0	n.a.
Respondent(cropped)[e]	3.2 - 4.5	n.a.	2	1.7 - 2.1	n.a.	1[f]
Respondent(fallow)[e]	4.6 - 4.9	n.a.	n.a.	n.a.	n.a.	n.a.

[a] = (n = 24) 14 respondents had only fields in private property; 10 respondents had cleared fields themselves (mean 1 ha) and thus in private property, in addition to a shared inheritance. The rest of the respondents (57 %) only share their fields with (male) family members

[b] = in total 79 % of respondents share fields with family members. Of those the Table gives an estimated mean of the available surface per household head. This estimation is based on the surface area stated for the extended family (mostly only explained as "a lot", with a vague indication of how many "a lot" is) divided by the number of people (male) that have to share the inherited fields

[c] = n = 30 (included 8 x 'many', counted as 5 ha each, and 1 x 11 big fields, counted as 2 ha each). 14 times these fathers had cleared and inherited, and twice they only cleared and did not inherit.

[d] = n = 43 (included 29 x 'many', counted as 5 ha each; 5 x several number of 'fields' counted as 1.25 ha each; 2 x '8 big fields', counted as 32 ha together). Three times these grandfathers cleared while also inheriting; once they bought land and 6 times they only inherited. The field surface area of the other 39 grandfathers is not known

[e] = the first number is for 1999; the second number for 2000

[f] = in 1999 three of the female respondents rented fields

[26] This rough calculation is uncertain in two ways. One is the fact that some of the clearances were carried out by great-grandfathers. The number of generations using those fields is therefore higher and thus the number of offspring is also higher. The other uncertainty has to do with the fact that 20 % of fathers cleared fields as well. In those cases, the number of offspring is correct but the number of fields to be shared is higher. These two effects are considered here as eliminating each other.

[27] Dietz *et al* (2001) calculate a basic need of 0.25 ha per person for subsistence agriculture in the Sahel-Soudan zone. It has to be said, however, that such a figure heavily depends on the type of soil, the climate, etc.

The rough estimations of the inhabitants themselves also show a decline in land availability. This is shown in Table 7.2.6 which is based on figures the respondents have come up with. The data on ownership are facts (except for some contested fields, but these represent only a very small proportion of the total area). Data on shared fields has been guessed by respondents and the same applies to data on fallow. Because guesses have been made within the same range for both the current generation as well as for the former generation, the data is useful to compare the different generations and the perception of respondents on their field position. It is remarkable that respondents seem to ignore a large part of the Oudda surface. It may be assumed that fallow lands are underestimated, especially when they are shared with an extended family[28]. Together with the data in Table 7.2.7 it can be stated that long(er) term fallow is not counted as such[29]. Although land availability is diminishing, if one counts the amount of fallow together with the amount of land cropped, land availability per person can still be regarded as high, also in the mind of the respondents.

All calculations made here give a picture of mean land availability. Although this general picture is not that bad, the reality for several individuals was very different. As in other villages, there are considerable land inequalities in Oudda (see Table 7.2.7). As mentioned before, women do not own land and have to search for land to rent or borrow.

Table 7.2.7 Range of available land surface area (for male household heads; n = 82) in quarts

Available quarts	0 - 0.9	1 - 5.9	6.0 - 9.9	10 - 14.9	15 - 19.9	20 - 29.9	30 - 39.9	40 - 99.9	> 100	?
Number of male household heads	6	26	14	9	2	8	8	4	2	3

The six people in the first column have access to land of less than what Dietz *et al* (2001) consider to be the minimum for subsistence of one person. The second column describes a field surface area which is still too small for a family of six people. In the not so fertile area of Oudda, and with the risk of too dry years in an area of low soil humidity also the people in the third column can be regarded as having a vulnerable position. So, extrapolating from respondents to the whole of Oudda, the land inequality in Oudda puts at least 39 %, but perhaps even 56 %, of households in danger.

When asked about the fertility of their fields only two people with less than 5.9 quart of land at their disposal mentioned having only fields with poor fertility. Of those with 6 to 14.9 quarts, two people mentioned having only poor fields (see Table 7.2.8). All the rest have good or a combination of good, bad and/or intermediate fields. Five people do not have personal fields at all and describe the fields they use as ‘sufficiently fertile’. Thus, with regard to land

[28] Counter-questioning on this issue during follow-up interviews in 2003 indeed revealed an underestimation of fallow land, partly because former fields situated on the slopes of formerly inhabited hills are not considered as ‘again useful’. Respondents explained that they are “Too steep and too much wild animals up there, nowadays”.

[29] This mis-calculation can be due to a language problem (for example, different words for long term and short term fallow) but, when discussing the issue with some interpreters, I could not distinguish any linguistic problems regarding the concept of ‘fallow’.

quality, only four households have real problems. Two of those are no part of the 39 % of people without enough surface area.

Table 7.2.8 *Land availability versus land quality* (n = 82, but 38 people have more than one type of land)

Available quarts	0 - 0.9	1 - 5.9	6.0 - 9.9	10 - 14.9	15 - 19.9	20 - 29.9	30 - 39.9	40 - 99.9	> 100	?
Good	1	23	10	7	2	2	7	2	2	4
Moderate	0	2	4	3	1	4	3	2	1	0
Bad	0	13	4	2	1	2	3	0	2	4
No opinion	5	0	1	0	0	0	0	0	0	1

Commoditisation of land

As can be seen in Table 7.2.6 commoditisation of land in Oudda is not that developed (as yet). Only four men of the current generation have bought some of their fields. Although respondents indicate that the price of fields has increased over the years (for example a five time increase for a normal size field in the plain from 40,000 Fcfa twenty years ago to 100,000 Fcfa now), they also say that arable surface is still 'payable'. Of course the price depends on the location (far or near the settlements, on slopes, etc.) and the soil quality, but that was no different in the past. It has to be added, however, that a price increase of just more than two times over the last twenty years, means a *de facto* decrease, because of inflation and the early 1990s Fcfa devaluation (see chapter 4).

The number of people that spend money in order to rent land has also not increased markedly. Over the years these numbers have changed slightly but over the generations there has been no net increase.

Thus, the commoditisation of land does not reflect a (felt) scarcity of land.

Calorific needs and production

Amount of production

Production figures of Oudda are based on 2 different sources: one is the production recorded by the researcher according to the respondents (that is based on memory and estimation). Most of the farmers can only recall the production of last year and the year before (see Table 7.2.9). The second source is the production figures of the village over the years recorded by the sub-departmental agricultural service (settled in Bourah, but with both a district and a village representative).

The production figures per ha, as given by the respondents in Table 7.2.9, are different from those of the agricultural services in Bourah over the same years (see table 7.2.10). This difference may be due to an under-estimation in the interviews (respondents tend to mention a lower production to hide their wealth and to appear poorer because that may lead to assistance being provided). On the other hand, the method of the Agricultural Services for measuring village production is based on household samples and extrapolation. Depending on which area is used as a sample source, production figures can differ greatly. The interviews for this study were mainly held in the more outlying neighbourhoods of Oudda where it is,

for example, more difficult to use chemical fertilisers [30] and where production may therefore be lower[31].

According to the respondents in the interviews, in the year 2000 the millet yield was especially disappointing due to a lack of rain at the end of the rainy season. Groundnuts produced reasonably well (although still with a lower per ha production than the year before). However, the surplus, which was due to an increase in cultivated surface area, caused the price on the market to drop. The Bana did not earn enough from the sale of beans and groundnuts to buy sufficient cereals.

Bambara groundnuts, which seem to generate a good additional income, are a risky crop. From time to time, for reasons which are not apparent, a field stops producing this crop. The Bana themselves explain this on the basis of 'the spell of the rainbow'. This means that, according to them, a rainbow stood above this field and from then on the field refuses Bambara groundnuts.

Table 7.2.9 *Production and surface area used by respondents in 1999 and 2000*
n = 125 (82 men and 43 women); most of the respondents live in the 'outer' neighbourhoods of Oudda and have their fields there or even further in the bush.

	1999			2000		
	Mean prod. / resp. (kg)	Mean surf. / resp. (ha)	Prod. / surf. (kg / ha)	Mean prod / resp. (kg)	Mean surf / resp. (ha)	Prod. /surf. (kg / ha)
Red sorghum[a]	373	0.8	484	348	1.0	344
White sorghum	196	0.5	438	141	0.7	201
Maize	404	0.33	1244	360	0.42	858
Rice	18	0.05	382	20	0.07	308
Peanut	273	0.67	411	429	1.08	399
Beans	97	0.36	271	121	0.47	256
Bamb.nuts	147	0.53	275	162	0.68	237
Total	1,174	3.24	449	1,259	4.42	342
Fallow[b]	n.a.	3.23	n.a.	n.a.	1.59	n.a.
Cereals	993	1.68	637	869	2.2	395

[a] = for all cereals the mean is given for only men (n = 82), as women do not cultivate these crops (only on very rare occasions)

[b] = measured only for men, as women do not own land. The estimates of fallow land are very rough. Only those fields that have been used recently or are to be used in the near future seem to have been counted[32]

The 'per ha' production data of the Agricultural Service over the years does not show a downward trend. Even a climatic influence is difficult to discern. It seems as if, in general, used fields are fertile enough to keep up production.

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[30] During the rainy season, Oudda-Bariki and neighbourhoods further down the road are no longer accessible because of running rivers.

[31] That the Agricultural Service data is faulty can be seen from the fact that the total production surface area of all of Oudda suddenly diminished from more than 4500 ha in 1997 and 1998 to less than 1500 ha in 1999 (in 2001 it increased again to nearly 2000 ha). The line officer in charge in 2002 could not explain this shift.

[32] Why the fallow surface in 2000 seems to be half as big as in 1999 cannot be explained. Apparently respondents have only counted those fields as fallow that they have been using the year before. Long(er) term fallow is not counted at all.

Table 7.2.10 Production per ha (kg and kcal) based on Agricultural Service data and interview data.

	1997 (Agric.serv)	1998 (Agric.serv)	1999 (Agric.serv)	1999 (Interviews)	2000 (Agric.serv)	2000 (Interviews)	2001 (Agric.serv)
Mais (kg/ha)	1,610	1,920	1,600	1,244	1,100	858	1,200
Mais (kcal/ha)	5,115.9	6,101.0	5,084.3	3,952.9	3,495.4	2,726.4	3,813.1
Sorghum (kg/ha)	900	850	870	461	910	273	800
Sorghum (kcal/ha)	2,781.9	2,627.4	2,689.2	1,424.9	2,812.8	1,894.9	2,472.8
Rice (kg/ha)	1,490	1,600	1,530	382	1,300	308	1,200
Rice (kcal/ha)	5,478.4	5,882.9	5,625.5	1,404.5	4,779.8	1,132.5	4,412.2
Peanuts (kg/ha)	600	1,290	1,300	411	1,390	399	990
Peanuts (kcal/ha)	3,163.3	6,801.1	6,853.9	2,166.9	7,328.4	2,103.6	5,219.5
Beans (kg/ha)	680	450	490	271	600	256	700
Beans (kcal/ha)	2,325.3	1,538.8	1,675.6	926.7	2,051.7	875.4	2,393.7
Bamb.nuts (kg/ha)	1,210	1,020	1,180	275	1,300	237	1,110
Bamb.nuts (kcal/ha)	4,137.6	3,487.9	4,,035.0	940.4	4,445.4	810.4	3,795.7

Needs

When only counting cereals, an average household (consisting of 3.0 adults and 3.2 children, and thus with a need of 1424 kg of cereals) generally had a shortage of 299 kg of cereals in 1999 and 389 kg in 2000 (see Table 7.2.11). Of the household heads interviewed[33], 58 % did not produce the amount of cereals needed according to FAO standards[34] to meet the energy requirements of their compound members and themselves (both in 1999 and in 2000). Nevertheless, 16 % of respondents claim that they are very happy in Oudda because of the abundance of food. Moreover, almost all respondents said they were satisfied with the 1999 production. On average, the cereal production is sufficient to meet the needs of a household, according to respondents' own ideas.

Table 7.2.11 Cereals needs and production per mean household in Oudda per year (in kg), according to the own perception of the respondents and the FAO calculation.

	Needed	Produced	
		1999	2000
According to respondents	820	1,125	1,035
Acc. to FAO calculations	1,424	n.a.	n.a.

The discrepancy may be due to the fact that the Bana do not get their calories from cereals alone. Although beans and groundnuts are cultivated for the market, it does not mean that they do not eat these crops as well. Everybody nibbles groundnuts while peeling them and those

[33] 82 household heads were interviewed, but 10 of them did not know their production.

[34] The FAO (FAO/WHO/UNU 1985) norm for calorific need is 2500 kcal/adult (2300/woman and 2800/man) and 1670 kcal/per child per day (my own summation from different age-group figures); 1 kg cereals contains 3342 kcal (3000-3600 kcal).

groundnuts that have a lesser quality are used in the sauce together with a certain proportion of the good quality groundnuts. Beans are used in the sauce and also in fritters, made to be sold at the local markets and partly for household consumption. Some households also produce potato and sweet potato, manioc and mostly also Bambara groundnuts. Table 7.2.12 shows the total agricultural calorific production.

Table 7.2.12 Comparison of calorific needs and calorific production per (mean) household per year

	Kcal needed	Kcal produced 1999	Kcal produced 2000
Oudda	4,820,341	6,269,719	6,959,578

The table shows that the village produces enough calories. Yet, poorer families do not meet their requirements (see Table 7.2.13). Discrepancies in the village are considerable with 15 of the families (20%) who have a surplus, producing two to four times what they need in one or both years. Sometimes this could make up for an enormous shortage in the other year. In other cases the overproduction was structural. On the other hand, shortages could also be enormous. Thirty-two (43 %) of the households had to manage with a production in calories in one or both years of less than half of what was needed, sometimes[35] even with no production at all.

Table 7.2.13 Percentage of households without enough cereals or calories

	Not enough cereals[a]			Not enough calories[b]		
	1999	2000	Both years	1999	2000	Both years
General shortage	35	38	19	43	30	20
Grave shortage[c]	32	15	7	38	15	12
Cereals	993	1.68	637	869	2.2	395

[a] = people's perception of need measured against production
[b] = FAO's figures of need measured against total agricultural calorific production
[c] = this means half of what is needed or less

From time to time, for example when guests are visiting or on festival days, people eat meat (mostly from their own small ruminants or chicken, or meat bought at the market). More often, spare money is used to buy some dried fish on the market to put into the sauce. Those families with cows can drink milk, but they can not and do not consume that much.

Next to these agricultural products, people can eat gathered wild products. The bush area in between the fields and surrounding the village offers several opportunities to find wild vegetables and starchy roots, as well as small animals, like mouse, birds, sometimes even a monkey. Although according to Cameroonian law it is forbidden to eat these last, villagers do enjoy the meat when they are able to catch one.

[35] In 1999, seventeen households did not produce anything, according to their testimony (= 23 %).

7.2.2 Human domain insecurities

Health insecurities

Every inhabitant of Oudda complains about the lack of a medical post in the village. During the dry season medical care can be obtained in the hospital of Guili, 8 km down the sandy road. From Baliwol, public transport in the form of motorcycles can be used, but most inhabitants do not have enough money to do so. Otherwise a donkey or a bicycle has to be used to transport ill people. But, again, there are not many inhabitants of Oudda who have one of these, so in emergencies they have to borrow some form of transport. And, antenatal and postnatal care is only provided at the hospital of Guili, except for some mid-wife type of assistance in the village based on the practical experience of older women. Unfortunately, in the rainy season (3 to 4 months) the road to Guili is blocked by at least two big rivers. Inhabitants of all Oudda neighbourhoods highlight the related death toll. Typical tropical diseases, such as malaria and tuberculosis, as well as the drinking water related amoebas and various intestinal pathological bacteria and worms are threats to people's health. However, there is no money to purchase modern medicines.

All Oudda neighbourhoods have one or more water wells, but because these are open and because people use loose ropes and buckets to draw the water, they become easily contaminated. This adds to the number of intestinal diseases. When working in far-off fields (sometimes more than one hour's walk), people drink water from streams and pools. Later in the year these are heavily contaminated as they are also used by cattle, for bathing, etc.

Fortunately, traditional health systems are still in place. These are mostly more accessible to villagers as they are more embedded in the physical and social fabric of the community and such services do not (always) have to be paid for in cash. Abundant bush areas means the gathering of ingredients for traditional medicines is not a problem. However, some of the traditional doctors complain about a diminishing of certain species, both plants and animals, whose leaves or skin particles are, for example, indispensable. Younger 'doctors' explain that they try to work together with their 'western' colleagues: "each has his precise task"[36].

Educational insecurities

As described in Chapter 4 and in the case of the Diamaré and Tupuri regions in Chapter 5, educational possibilities diminished compared to the early Eighties of the last century. With the economic crisis and the following Structural Adjustment Programmes of the World Bank and IMF, the right of Cameroonian citizens to have free education has become more a written than an executed right. A decrease in the number of training places and thus a lack of properly educated teachers has reduced the quality of education and increased the class sizes. In Oudda there are sometimes more than 100 pupils per class. As is the case elsewhere, the primary school in Oudda, located in the centre of the village, is run by an educated, government-paid director, assisted by several so-called 'parent teachers'. The latter are young men with at least some years of secondary school education themselves who are paid by the parents of children attending the school. Sending children to school therefore means the payment of a school fee. The director does not live in Oudda, but in Guili, so when the rivers are swollen (in and directly after the rainy season), he cannot reach his pupils. In the case of the outer neighbourhood of Waza, the centre of the village is still two hours away. Parents who want to send their chil-

[36] Interview with Hamadou, 32 years old, Oudda Bariki, January 2001.

dren to school complain about the distance. They state that it is too far for the little ones and there are too many possibilities for the elder ones to detour on the way. "We do not have any control as to whether they reach the school or not. The teacher never comes by this way to inform us about whether our children have been playing truant."[37]

In order to attend secondary school, pupils have to leave the area. Apart from the school fees and the books, notebooks and school uniforms, they need money to find lodgings. Several of them try to stay with relatives in town but even then cash or some other reimbursement has to be given. For girls, the fact that they have to be 'away from home' and the necessity of staying in boarding houses diminishes their chances of higher education. Parents are hesitant about whether they should send their daughters away or not because they fear a lack of protection. They fear that the loose moral codes in the 'big city' will culminate in a dishonouring of their daughters. They therefore prefer not to let them go.

In addition, most parents, especially those that have attended secondary school themselves, are perfectly aware of the lack of options for using this education. They all came back to the village to become a farmer, although in their schooldays they dreamt of careers in governmental offices. Even church-based support for learning more about agricultural modernisation seems to be diminishing.

7.2.3 Economic insecurities

Cash Crop insecurities

Several elder cultivators pointed out that cotton used to be produced in the area, mostly for personal use by weavers for traditional cloth and '*ganduras*'[38]. The rise of commercial cotton cultivation in the rest of the Far North province meant it almost totally disappeared from the mountains. Instead, the groundnut production for the market has gained a big footing in the region. More than 90 % of the Bana with some acres of land at their disposal produce groundnuts (at least from time to time). Unfortunately, the groundnut price changes enormously over the year and between the years. Large-scale merchants buy the groundnuts directly after the harvest (November-December) at the regional markets like Guili, when the local producers have had the time to peel them. They calculate on the basis of information from various sources (rumours from Douala, the international export centre, about harvests in other groundnut producing countries; direct information about production in the rest of Cameroon itself and from, for example, Nigeria) and build a security margin into their purchasing prices. Nevertheless, variations are big enough to entice people to cultivate groundnuts the year after a year of good prices. During this second year (with normal precipitation), production increases in such a way that the price falls. The fact that people have chosen to cultivate more groundnuts and less grain leads to a relative lack of cereals. That, in turn, increases market prices in a time that earnings from groundnuts are lower than expected. Thus, although groundnuts are a cash crop related to the international market, local producers are confronted by a local 'pig cycle'. The world market price determines benefit or loss only in the case of the bigger traders.

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[37] Interview with Kapoua, Oudda Waza, January 2001.

[38] The big cotton dress from shoulders to almost the ground, in accord with Fulbe fashion, worn by men.

Farm animals and insecurities

With regard to animal husbandry the situation in the Oudda territory is unclear. As explained in Chapter 4, counting the number of animals present is a difficult undertaking. However, several organisations have tried to measure and estimate both cattle and small ruminants.

In most parts of the Sahel-Sudan zone, cattle numbers decreased during the two drought periods at the end of the last century. In contrast, and according to Seignobos (2000e: 119) the number of cattle in Mayo Tsanaga department doubled between 1960 and 1980, mostly due to incoming Fulbe who, in these dry years, were attracted by the watering places in the dry season and the harvest residues on which to feed their cattle. In 1980, the Mogodé and Guili districts had 25 – 50 cattle/km^2 (0.5 – 1 per person). The increase in the department continued up till 1986[39], followed by a steady decrease until, in 1995, the lowest total number of 73,250 was reached (two years later than the provincial lowest amount). From then on, cattle numbers increased again.

Table 7.2.14 Numbers of cattle over the years for the department and 2 sub-departments

	1986	1992	1995	2000
Mayo Tsanaga	125,407	n.av.	73,250	167,786
Mogodé[a]	n.av.	n.av.	n.av.	15,875
Bourah	13,705	13,164	10,675	11,448

[a] = numbers of 1986 – 1995 could not be obtained because Mogodé sub-department was only installed in 1996; before that it was part of sub-department Mokolo.

The Bana themselves never were a cattle-keeping group. However, the rich used to have some cows (mostly of the Kapsiki type[40]). As is the habit in Sub-Saharan Africa, a surplus of money is invested in cattle as a bank deposit. These days, in the whole mountain range, a shift to zebu cattle is taking place to the detriment of the Kapsiki cattle. Unfortunately this shift also means a higher risk to the health status of the cattle, as the Kapsiki race is more hardy, more used to the mountain environment and more Trypanosomiasis resistant (important for future raising programmes).

The Bana explain their current preference for Zebu by highlighting the longer growth period of this race. Kapsiki cattle are relatively small and reach their adult height quicker. They do not grow like Zebu and therefore you gain less from your investment. For this same reason even the value of young Zebu is higher on the market. The shift means bigger cattle, with a higher slaughter weight, and a higher fodder intake versus growth ratio. At the regional animal market in Guili, slaughter animals are more expensive than animals bought for labour or for enlargement of one's herd. The price of a young adult bull for slaughter, seemingly in good condition, can reach 120,000 Fcfa. Zebu calves which are approximately six months old and which are in good shape can cost 40 to 60,000 Fcfa. However, a lot of cattle trading takes place at home where Nigerian 'smugglers' pay more and police do not interfere by demanding taxes[41].

[39] Seignobos (2000e) mentions a decrease of cattle in Mayo Tsanaga from 1980 to 1988, except for Bourah sub-department (increase of up to 25 %).

[40] The small *Bos taurus* race, see chapters 4 and 6.

[41] During my stay no Kapsiki cattle were sold and none of the owners could tell me the usual price. They only thought "probably I can get the same for a 6 month old calve as for a good sheep", but this was not proven. I could not find potential or even imaginary buyers with whom to discuss prices.

For the Bana the high number of incoming cattle in the dry years made their position as cattle keepers weaker because of the competition over fodder. With the decline of incoming Fulbe cattle, the Bana took up more cattle keeping than was their custom. This is partly due to the increase in draught animals. One generation ago almost nobody used a plough. There were, of course, some donkeys for transport, but oxen for labour were rare. In 2000, 33 % of the population already owned either donkeys or cattle for draught. To work with the plough a farmer needs two animals, as the soils are considered to be heavy[42]. Thus, the step to purchasing a plough and accompanying animals is a big one because a lot of money is involved.

Actual cattle numbers in Oudda (see Table 7.2.15) show that Oudda experiences more or less the same trend of increase as the rest of the department. Although the whole village is not yet at the 1980 densities, Fulbe cattle keepers seem to be reaching former cattle numbers.

Table 7.2.15 Number and density of cattle in 2000

	Vaccinated cattle	Number of owners	Mean cattle per owner (+range)	Cattle per km^2
Oudda total[a]	2,587	106	24.4 (2 - 320)	17.5
Oudda Bana	1,540	95	16 (2 - 135)	n.av.
Oudda Fulbe	1,047	11	95 (4 - 320)	42[c]
Kubadje Fulbe[b]	650	17	38 (8 - 90)	325[d]

[a] = This data is based on the vaccination campaign of May 2000 carried out by Gailaye Yata, the local veterinary officer of Guili. It is very likely that at the time of vaccination the majority of the cattle were on their dry season transhumance to Nigeria and elsewhere[43]

[b] = In the case of Kubadje the vaccination that generated the numbers was performed in November 2000, a time at which the herds had not yet left the area

[c] = This number is calculated on the basis of the assumption that the Fulbe of Oudda graze their cattle solely in the neighbouring Boubakary Nené reserve (see Figure 7.3). The actual density will be lower because they also use other bush-forest land in the vicinity

[d] = This number is based on the assumption that the Kubadje Fulbe graze their cattle solely in their own reserve. However, they not only use the harvest stubbles on Kila fields as well, but also the more extended pasture area of Modélé

For the Bana an ‘owner’ means a (male) household head. It is very rare for a woman to possess cattle. When they do, they are always added to a brother’s or uncle’s herd. In the case of the Fulbe the situation is different. Women inherit cattle from fathers and mothers, receive cattle as gifts, etc[44]. Because all the cattle of an extended family (that is of a father and his sons, together with the cattle of sisters) are herded in one herd, here an ‘owner’ means the head of a group of households who manages the herd.

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[42] This does not correspond with the information on soil properties as given by soil scientists (Brabant and Gavaud 1985): according to them the majority of the soils consist of a high sand fraction (see section 7.2.1). Normally sand is easy to till. Perhaps it has to do with the stones in the fields.

[43] According to the veterinary service (animal husbandry line-office) of Bourah that also serves Oudda, cattle numbers increased between 1998 and 2002 from 1468 to 1829. Again, these numbers are claimed to be based on vaccinated cattle. The discrepancy between the numbers of the Guili veterinarian and the administration in the sub-departmental headquarter Bourah remains a mystery.

[44] See, for example, De Bruijn and Van Dijk (1995) or Moritz (2003).

Table 7.2.16. *Division of cattle over the households* (numbers of cattle based on vaccination numbers in 2000)[45]

	Inhabitants	Households	Cattle	Number of owners	Cattle per owner (+range)
Baliwol	1,799	300	764	55	14 (2 - 70)
Bariki (without Guiki)	816	136	175	22	8 (2 - 25)
Waza-Hlaka	1,038	173	547	23	24 (4 - 135)
Guiki (= Fulbe)	210	42	1,101	11	100 (4 - 320)

In the whole of Oudda the number of Bana households is approximately 609. There are also 42 Fulbe households. Of the Bana households 95 possess cattle: that is 16 %, but the range of cattle per household is considerable (see table 7.2.16)[46]. Moreover, the further into the bush (away from Guili) you go the lower the percentage of cattle owners, except in the case of the Fulbe neighbourhood.

Table 7.2.17 *Numbers of small ruminants.* (Department, 2 sub-departments, village)

	1986		1992		1995[a]		2000[b]	
	goat	sheep	goat	sheep	goat	sheep	goat	sheep
Bourah	9,353[c]	14,290	23,429	15,446	14,600	9,599	21,398	12,126
Oudda	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	4,325	3,650
Mogodé	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	21,398[d]	12,338
MayoTsanaga	213,048[e]	201,094[e]	190,185	122,581	127,732	107,719	213,983	121,259

[a] = Figures for 1986 – 1995 are based on the year reports of the departmental animal husbandry service
[b] = Figures for 2000 are based on data of the provincial animal husbandry service, except for Oudda itself which are based on the sub-departmental animal husbandry service, Bourah
[c] = One may wonder whether this figure is correct because normally the number of goats is higher than that of sheep. In 1986, this was indeed the case in the other sub-departments of Mayo Tsanaga.
[d] = The fact that the numbers of goats for Bourah and Mogodé are exactly the same makes one wonder whether these figures are true
[e] = The steady decline in numbers was already noticeable earlier than 1986

Establishing numbers of small ruminants is more difficult still. In general, though, these numbers show the same trend as those of cattle. In 1980, the Western half of the Mandara Mountains in the Kapsiki and Bana region had a small ruminant density of 75 – 100 animals /km^2. Further to the east, where the human population density is lower, these numbers were 25 – 50 sheep and goats per km^2. The decrease in ruminant numbers in Bourah started later in the case of small

[45] The fact that cattle numbers are very vague and unreliable can be illustrated by the difference between the vaccination numbers and the numbers mentioned during interviews. Of the 82 male respondents, 21 mentioned that they possess cattle (with 26 % a higher than village level counted during vaccination). Most of those have more cattle vaccinated than they say they possess. A possible explanation may be that small owners have added their cattle to the herd of a bigger owner for the purpose of vaccination.

[46] Both the percentage of households with cattle and the mean number of cattle per household is much lower than in Dzambou (27 % owners and 18 cattle per owner) if the Fulbe are not counted.

ruminants than in the case of cattle and also later than at departmental level, although it was in the same order. The departmental decline and the sub-departmental increase contradicts Seignobos' claim that there was a stable number of small ruminants in the whole province from 1985 to 1990 (Seignobos 2000e: 119). The growth of the numbers of both groups of animals restarted in the same 1995-1996 period. Contrary to cattle numbers for the whole department, but in accordance with those of Bourah sub-department, the numbers of small ruminants in 2000 had not yet been not totally restored to the 1986 levels (see Table 7.2.17).

In Oudda itself, according to the animal husbandry service in Bourah, small ruminant numbers increased from 1999 to 2002. Officially, 5,217 sheep and 5,107 goats were counted at that time. This already means 70 animals per km^2 and therefore almost a return to 1980 levels. But the same service data reveals high extremes over these 4 years. For example there were only 1,013 goats in 1999 and only 1,722 sheep in 2001, after a high of 4,800 sheep in 1999. These fluctuations can generally be attributed to epidemics, the employees of the service explain. But they do not have any idea as to which diseases take these tolls, let alone how to eradicate them. The keeping, breeding, diseases and deaths of small animals is a personal affair. These numbers reveal the vulnerability of the 'normal' Bana and their insecurity with regard to the so-called 'poor men's cows'.

Also those people who try to raise chicken are confronted by contagious diseases every year. More than half of the chicken owners complain about chicken deaths over the last year, sometimes affecting all their birds. Agricultural extension workers have started vaccination programmes to counter the huge numbers of deaths, but farmers are not used to vaccinating poultry. If vaccination takes place in an already contaminated environment, the chickens will not be protected and owners think it is due to the vaccination that the birds die.

The insecurity of the Fulbe of Oudda has other causes. An increase in the number of cattle means an increased risk of the spread of diseases. According to them their herds are not growing but instead the total number of cattle in the region is increasing because the Bana and Kapsiki have started cattle grazing[47]. They complain about the diminishing access to harvest remains and the rising competition for fodder. The Fulbe estimate that 22 herds of 50 head (= 1100 head) stay in their Boubakary Néné reserve - with a surface area of approximately 25 km^2 - during the rainy season (see Figure 7.3). This is in addition to quite a lot of herds that trespass on their way to or from Maroua district. The report by the head of the departmental animal husbandry service (Djonwé 2002) speaks of 713 cattle from the Diamaré in the mountains and 630 cattle trespassing from Hina to the north. Not all these cattle pass through Oudda and Kila, but some do. That means that in the rainy season the number of TLU per ha surpasses the 0.3.

Although the Fulbe claim that more and more Bana are keeping cattle, Table 7.2.15 and 7.2.16 together with the population numbers depicted in Table 7.2.4 show that, although quite a number of farmers have cattle these days, it are still mainly Fulbe who contribute to the vast number of cattle in the region.

Households (six household members) with the possibility of slaughtering 21 cattle per year may subsist on meat. This means they need a herd of at least 175 cattle (see Dietz *et al* 2001: 197-198). In Oudda there are only two Fulbe household heads who possess more than that

[47] Two surveys of the CZV of Mogodé in 1999 and 2000 show a slight decrease of cattle numbers in the whole of Mogodé canton: 6520 head in 1999 and 5870 in 2000 (Tchamaya, 2000).

number, but they have to share with more than 6 family members. To live off the meat of small ruminants, a six person household needs to slaughter around 140 goats a year. Given that there are 8,000 small ruminants in Oudda, on average a household can dispose of 12.3 small ruminants (two per person). If all stay alive and the off-take is 25 % per year, a household can slaughter three animals per year. This gives them a small amount of added energy and protein. But it is not much and it hardly ever occurs that all the animals survive the harsh conditions.

For the Bana individually, an increasing number of animals is a sign of prosperity and reduces insecurities. For the agriculturalists in general, more ruminants are good for improving the fertility of the soils. On the other hand, too many ruminants can put excessive pressure on the available bush land[48]. The issue is how to find a balance. The head of the departmental animal husbandry service states that the mountains can still cope with an increase in cattle without being overstocked (Djonwè 2002). With a stocking rate of 0.17 TLU/ha, Oudda indeed still seems to have room enough. Of course, this is a general statement that has to be adjusted for each area. The activities of the State as regards improving cattle-keeping opportunities, such as the instalment of grazing reserves throughout the mountain range, mostly appear to be a threat to the agricultural community[49].

Thus, keeping cattle or small ruminants and even chicken is a risky undertaking because the Bana do not have special knowledge to keep these animals healthy. It is almost impossible to access such knowledge. Especially during the dangerous rainy season veterinary aid cannot be reached, as the nearest post is in Guili on the other side of at least two big (seasonal) rivers. Even the market at which medicines can be bought is in that town. In addition, official aid is expensive. Vaccination programs do not reach most small ruminant owners or chicken owners[50]. Individual owners of all types of farm animals have to face regular losses because of diseases that cannot be treated. In the eastern part of Oudda (the region where the interviews were held) 33 % of the households suffered from the loss of one or more herbivores over 1999 and 2000 due to disease. To that can be added losses due to theft of which 8 % of the respondents complained.

In short, for some families the cattle (or small ruminants) they possess help them to meet their energy and protein needs or form a safety valve in times of hardship. However, the veterinary status and risks, together with the lack of knowledge and possibilities to care for the livestock, make livestock keeping an insecure activity. In addition, the vast majority of people in the village do not possess any cattle at all and even small ruminants are not owned by every household. Those without even a goat or sheep do not have anything in reserve.

Non-agricultural activities and insecurities

Off-farm activities

The economic crisis of the early 1990s meant a decrease in the possibilities for earning money

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[48] The carrying capacity of the 1,000 mm rain mountain belt lies between 1.2 and 0.33 TLU/ha, under favourite conditions (Breman (1975) and Gaston (1996) respectively. See chapter 4.2.1).

[49] In addition, some of the existing pasture reserves seem to be already overstocked (see Mvondo Awono *et al* (2001).

[50] Vaccination of chickens is something new and most people (women, as chicken owners) are not used to it. In addition, one bottle contains doses for 50 chickens. It is very difficult to organise a vaccination session with enough owners to participate at the same time so as not to waste doses (and thus increasing the price).

outside the own farm. There are no State jobs available in Oudda at all. Becoming a teacher at the local primary school is no option as only a few teachers are required, there are no vacancies and the present parents cannot pay for more. Outside Oudda, State jobs can only be acquired by those with higher education or the relevant qualifications, in combination with having 'friends' in the State offices. The Bana do not have such a network (see section 'social insecurities').

Because of the closeness of Nigeria, trade used to offer the more daring men an income, but nowadays the trans-border controls have been increased and a lot of money has to be paid (under the table) to escape import restrictions.

The use of crops which mature more quickly has generated possibilities related to agricultural labour migration. After the harvest at home, some people may move on to help harvest crops that mature later elsewhere. These are once again usually more adventurous young men who travel to Nigeria or to the surroundings of Maroua to help with the *muskuaari* (transplant-sorghum) harvest. Unfortunately, in the years that this addition in income is most needed – the dryer years with a lower yield –the *muskuaari* harvest is often disappointing and less labour is needed to harvest it.

On-farm activities

The possibilities for working from the home depend on the availability of raw materials in the form of 'wild' or cultivated products. With the abundance of bush area, such raw materials can easily be gathered. However, a rise in 'modernisation ideas' and the proximity of Nigeria with its cheap (plastic) products means a decrease in demand for traditional storing utensils or mats, etc. every year. Thus, production of these traditional products does not result in the same profits as in the past.

7.2.4 Social insecurities

Family and clan insecurities

Most of the Bana feel strong ties with their fathers and brothers, mothers and sisters and even with the more extended family of (patrilineal) uncles and nephews. It is only very occasionally that families experience a kind of breakdown of the social fabric, as a result of which sons or old age parents have to look after themselves. This is then regarded with disapproval by neighbours. Bana do not have a cultural taboo of marrying in the own clan, so many wives also come from the Oudda territory. This means the family-in-law is close by. Payment of bride-prices is (still) a common habit that binds young families firmly to the wife's clan. Adult girls explain that they want a bride price to be paid when somebody wants to marry them. "Otherwise people may think you are worthless." Paradoxically, another bonding factor is the habit wives have of divorcing quickly. Some women have divorced more than 10 times, especially during their younger years. Most of the time they give as a reason that their husbands did not give them enough land, cloth or other materials, or they say he was violent or they quarrelled too much. Although they lose the lands they cultivated when they divorce, the threat of going is one of the women's security measures[51]. For the men it is a source of insecurity. More than one husband explained that he would do anything for his wife and give her as much as she wanted to make her stay (and therefore look after the children). But even then "she went away", one of them said.

[51] See also Van den Berg (1997) about the apparent paradox between land security and divorce, in her study about the Giziga women of Far North Province of Cameroon.

Sometimes, however, the divorce custom is a source of insecurity for the women themselves. It is not always their own decision to divorce. Sometimes it is the decision of the father, who forces his daughter to move on to another husband, one who gives a higher bride price or who has a higher status in the community or a position that fits in more with that of the woman. For example, after marrying his daughter to a young neighbour, one of the fathers took her back under the pretext that she should not be involved in a blacksmith's family.

The Bana, as a very small ethnic group (only around 16,000 Bana were recorded officially in 1996 which is 2 % of the Mandara population[52]), are very attached to each other. However, this does not prevent them from soon becoming distrustful of each other. If somebody is suddenly successful (with his crops or merchandise) someone of his fellow-villagers is sure to accuse him of witchcraft or an attempt to steal his wife. This means a judging session at the village or regional chief's court, which is mostly an expensive gathering. Thus, rising above the mean can be a dangerous practice.

A broader social insecurity is based on the fact that the Bana are not really represented at levels higher than regional ones. While all different ethnic groups have contacts with deputies and politicians both in Maroua and in Yaoundé, the Bana, with their small population, are unable to do the same.

Political insecurities

For the Bana of Oudda, party politics is not an issue. Their interpretation of the whole power situation is as follows: generally speaking, president Biya is considered the leader. He comes (and did come) to power by way of his RDPC party. So, all power lies with the RDPC, somewhere in Yaoundé. Yaoundé is far away. Down there, they do not know anything about the Mandara Mountains, let alone Oudda and the Bana. When you want something to be done here, to develop the region, Yaoundé has to decide. In the past they did help the whole North by abolishing intertribal feuds, but nowadays they have forgotten the region. If the village decides something for its own good, nowadays it cannot proceed with implementation because permission is always needed from Yaoundé, or at least from some authority that lives far away from Oudda. Thus, apart from reduced intertribal war and violence, the current position of Oudda is more difficult than in the past.

Conflict mediation

As in the other two case studies, the people of Oudda tend to choose the forum at which they prefer to settle their disputes. In cases of crop damage caused by livestock, both mutual agreements and the involvement of line agencies, local chiefs or the *lamido* may occur. The distance from Oudda to the sub-prefect in Bourah is too great to go there very often, although some inhabitants do make the effort to take caught animals to the mayor in order to ensure that the owner pays for his neglect.

More social conflicts, without economic repercussions are generally settled by the village and neighbourhood chiefs, often with the help of a '*conseiller*': one or two elderly men, especially appointed for this task. If they are unable to deal with the case, the *lamido*'s court and judges are next in line. A judge hears the parties in the conflict and several witnesses and sends (when deemed necessary) some of his helpers to the area of the dispute. Then he decides what

[52] Only two or three other groups, in the South of sub-department Bourah, are smaller.

is best. Afterwards he informs his boss, the *lamido*, who most of the time agrees but can also call for a re-opening of the case.

Land allocation and insecurities

In the Bana culture there are no land masters or other traditional chiefs who have the authority to decide about land allocation. Land that has been bush area for as long as everybody knows can be cleared of trees and bushes and therewith become the property of the person that cut that vegetation for the first time. Subsequently, the use, management and expropriation of arable land is a personal affair involving the owner or his offspring and is, at best, subject to decisions by male family elders in cases in which the fields of ancestors are not divided into small properties per offspring. When, according to the wishes of the first clearer of the land, the surface remains the property of the whole (extended) family, all male family members are entitled to use the fields they want. In the event of conflicts concerning the fields between such members, the oldest family members function as arbiters. They also have the power to make decisions on sales. Yet, in most of these big families other adult male members can have their say and (most of the time) their arguments have almost the same weight as those of the elders. It is not important whether the oldest person in the patri-line is present in Oudda or not. He still has to be contacted when decisions about the land have to be taken.

If the first clearer has not expressed the wish that his land be kept as a united property, the offspring can decide to divide the surface into portions and have these inherited by the sons. As a rule these portions are equal in size and, most of the time, equal in quality as well as regards the soil fertility and the distance from the compounds. In these cases the inheritors are real owners and have all the rights that pertain to such a status. Of the 82 household heads that were interviewed, only 18 had full ownership rights over (part of, for example the part they bought or cleared themselves) their land.

Women do not have the right to possess land. Unofficially they are not even entitled to buy. Although respondents do agree that it is officially possible, they point out that it has never happened and never will happen. Women have user rights via their husbands. When a Bana man has only one wife, they mostly cultivate together. The wife helps her husband with the ploughing and weeding of the cereals fields (sorghum, maize and rice are specific men's crops[53]), they have shared groundnuts and bean fields, but she also cultivates her 'personal' fields with Bambara groundnuts, the typical women's product[54].

In the event that the man has several spouses, the husband gives fields to his wives to use as they like, whether or not with the obligation to pay him back a certain amount of the yield: "to show that they are his fields". Divorced women have to rely on fathers or brothers to ask for land, but this is an insecure solution. To safeguard their access to land they have to be married and, thus, marry again quickly after divorce.

> For example Martine (40 years old) quarrelled with her husband and decided to leave him, taking with her a baby on her back. She went back to her father in a neighbouring village but he has only one quart to cultivate for him and his remaining children. He told her she had to look for a new husband quickly. After a period of reflection she went back to her first husband where her

[53] Women household heads can borrow or lend fields and are allowed to cultivate cereals.

[54] In Oudda Bariki I discovered one exceptional case of a woman who used fields that her son – now living in Maroua - had bought for her after his father had died.

other children were living as well. Habiba (32 years) was married to a man in the town of Bourah. She was able to use her husband's fields in the vicinity of the town. When they broke up she came back to Oudda but decided she could not stay with her parents because she had become a Muslim in the meantime. She now lives in the house of a Muslim family in Bariki, but they cannot (or will not) offer her a field, so she is trying to rent some land with the profits of her groundnut production in Bourah. The problem is that Bourah is far away and it is by no means easy to sell the groundnuts. In addition, even if she did have money, renting land in Oudda would not be that easy for her.

In line with the fact that fields are inherited from ancestors who cleared the bush, and the fact that those ancestors started with these clearances when they were still living on the mountain slopes, fields are scattered over a large area. From the mountain tops all the (great-) grandfathers started to develop the land at the foot of the slope. Thereafter they moved on and continued clearing in a certain direction further and further into the bush. Depending on health and perseverance of the farmer, areas of various sizes were cleared and varying distances away. When people finally descended from the mountains for good they established their first compounds in the vicinity of the first fields. Afterwards they came down a bit further, but they almost never choose to settle somewhere near their furthest fields, alone in the bush as it were. Several concentrated settlements were founded that now constitute the different neighbourhoods of Oudda (see Fig. 7.3).

Because of that clearance and settlement pattern, the residential neighbourhood is almost never the only location of someone's fields. Next to that, the amount of surface area used by people from one neighbourhood in the territory of another differs as well. Families from Bariki have spare land in the Waza bush, for example. In Baliwol, the neighbourhood along the road to Guili, some families do not have any fallow fields left, neither within their neighbourhood nor elsewhere, because not many of them have land outside this neighbourhood. Most of them started with less surface area (due to their great-grandfathers having less 'spirit' as regards clearing bush further away), and their family sizes have grown faster. So, nowadays all fields have to be used permanently. Only a few families in Baliwol possess fields far away in the bush that can be used alternately. Sometimes, but not often, these are situated in the direction of Hlaka/Waza. Although not all inhabitants of Baliwol were interviewed, it seems that no families there have fields in the Jiksa region.

Apart from the family structures and elders that have power to take decisions concerning land, the only other recognised authority is the traditional regional chief, the *lamido* of Guili, himself a Bana. He has the right to allocate certain areas for common purposes such as pasture. In reality he decides that in the territory of a certain neighbourhood an area needs to be appointed for the goal he has expressed, and the neighbourhood chief or conglomerate-neighbourhood[55] chief decides which area it will be, even when that area was already the property of a certain family or person. Accordingly, the *lamido* has the right to send his noblemen[56] to see to the implementation of such decisions.

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[55] In Oudda some neighbourhoods have a joint chief, while other neighbourhoods have their own. Sometimes a neighbourhood chief is also a conglomerate-neighbourhood chief at the same time, like the chief of Bariki, whose chieftaincy is the oldest in the whole of Oudda and even older than the Guili *lamidat*.

[56] Some of a *lamido*'s noblemen reside almost permanently at his side at the court during the daytime. They have specific jobs, like judging in minor offence cases, serving as assistants in other cases or they are just on hand to brighten up the ambiance.

It is on the basis of such appointments that Oudda has a group of settled Fulbe on its territory. The Fulbe neighbourhood 'Guiki', headed by *lawan* Boubakary, is situated at the eastside of Oudda centre (Bariki), adjacent to the big north-south flowing river (at least in the rainy season) that forms more or less the boundary of the biggest pasture area in Oudda[57]. It was the father of the current *lamido* who decided to delineate four of such areas to make sure that cattle had their proper grazing space[58]. For most of the Bana these reserves have a legitimate status. Although some cultivators try to clear fields at the borders of the reserve, they do so at their own risk and complaints about cattle damage are not allowed. This is contrary to normal regional habits that place all responsibility for damage on the cattle owner.

In addition, the status of the Boubakary Néné pasture is also confirmed by all sorts of 'modern' authorities, such as the sub-prefect of the sub-department, the sub-departmental heads of the agricultural and animal husbandry services, the sub-departmental police superintendent, etc. However, it is still unclear who has the real power to ensure implementation. Even within the Oudda territory, farmers who invade pasture reserves may be warned by the *lamido* or one of the modern officials, but punishment or actual removal does not occur.

Cultural insecurities

The increase of new religions (Christianity and Islam) is causing the bonds provided by the traditional religion to disappear. The Lutheran church as well as Islam, for example, prohibit alcohol. Social drinking gatherings, that existed before as part of the yearly cycle and were related to ancestor worship, can only be attended by that section of the population that does not adhere to the new religious rules. A kind of divide has therefore developed within the community. On the other hand, the fact that beer drinking is now extended to market days instead of restricted to traditional religious occasions means that exchanges between the different groups are possible. Although Catholics and followers of the traditional religion drink their beer together in one corner of the market, they will still go and speak to Muslims or Protestants in another corner.

Incoming or visiting religious leaders, that try to mobilise feelings for their specific religion, do not seem to incite hostile feelings or behaviour. Although it would be only natural to enhance one's own religion by demonising another one, in the reality of Oudda this does not happen. People are free to choose the religion (or sect) they want, to change and change back again, to visit churches and attend mass or pray to Allah whenever or wherever they want. Within families, a number of members may adhere to different churches and beliefs without even so much as a dispute. Very occasionally a father and a son may have a conflict about religion, but mostly this is based on another discord and both parties are soon able to separate the religious problem from the real inconvenience.

In short, it seems as if social insecurities are no different from those in the past. The only difficulty that can become a real problem is the link with higher level institutions.

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[57] This pasture reserve is called after the Fulbe lawan "Boubakary Néné" (see Figure 7.3).

[58] The surface area corresponded to the number of cattle present at the moment of creation. The Fulbe leader of each neighbourhood with such a reserve received an official paper to confirm the existence of the pasture. Three of the four pasture areas are situated within the Oudda boundaries: one next to the neighbourhood Waza, one in the direction of Modélé and the third and biggest east of neighbourhood Guiki. This one is called Boubakary Néné.

7.3 Investments: going to Box 2

As depicted in the "insecurity complex" in Chapter 3 (Methodology), when people experience insecurities in a mutually influencing complex of domains, they may search for strategies to overcome these. In the "VoE"-diagram of Chapter 2 it is the step from Box 1 to Box 2 in which actors perceive the different possibilities (Figure 7.1). To understand the step to Box 2 of the diagram the diversity of options that lead to certain strategies and the choice for specific options have to be explored. With a variety of capitals at hand (see Chapter 2) the Bana as well as the Fulbe invest in social relationships, economic goods, personal capabilities or environmental circumstances to improve their future and that of their children. Sometimes people do not really invest in anything but just 'muddle through', perhaps merely hoping that their positions will improve in the future. The investments are shaped by the combined effect of each of the four categories of the Actor-in-Context model as formulated by De Groot and Kamminga (1995; See Chapter 2): feasibility of options, objectified motivations, interpretations and the autonomy towards implementation per actor. I will describe the factors that influence these options and make people chose 'escape routes' (downward arrows from the central part of the scheme, see Figure 7.1) or make them decide to take the step towards the invasion of a new niche.

7.3.1 Environmental investments

Investments in the quality of land

In order to improve the land quality and yields the Bana can use the same techniques and methods as the Kapsiki (see chapter 6) just north of them. Table 7.3.1 shows the different uses of field improvement techniques. The most important in Oudda is the use of fallow rotation. In these mountains, the cycle can be very long. Sometimes respondents indicate that they have used their fields for at least twenty years now, or that their father or uncles already used it before they were born. Most actors respond that they use a field for 5 to 7 years and that the fallow period lasts twice as long. However, that all depends on the basic fertility of the location and the possibility of maintaining it with animal dung (the only option available in the past to improve fertility actively). Some areas have not been used for over 20 years, as can be seen by the height of the trees.

In Oudda, the use of chemical fertilisers is fraught with difficulties because they are not sold in the village. Those farmers that have money to purchase fertilisers (19 % of respondents) depend on the occasional arrival of a truck from some chemical company or other at the regional market in Guili. But, as is evident from their complaints, such fertilisers always arrive too late in the season when the effect on the field is far less than it could be.

Table 7.3.1 *Fertility improving methods* (in % of respondents. Some actors use different methods at the same time)

	n	Fallow rotation	Animal manure	House-holdwaste	Natural fert. from elsewhere	Chem. fert. for sorghum	nothing
Men	82	80	22	5	2	20	6
Women	43	37	5	2	0	19	41
total	125	66	16	4	2	19	18.4

Although 61 % of respondents have farm animals that produce manure, Table 7.3.1 shows that only a small proportion of the respondents (16 %) use this natural fertiliser to improve the fields. Table 7.3.2 shows the connection between possession of ruminants and the use of their dung. The third part of this table shows 'animals' as a variable to show a possible connection between, on the one hand, the number of entities to be brought together to gather their dung and, on the other hand, the use of dung. Table 7.3.3 depicts the relationship between ownership of TLU and the use of dung. The ownership of donkeys (35 people out of 125) does not change the numbers in the third part of Table 7.3.2. Those people who have only donkeys and no other farm animals do not use their dung to improve their fields. The majority of those who use the droppings of their animals belong to the richer people in the village who have a lot of animals (or a high TLU). Gathering animal dung is most probably only worthwhile when people have a certain number of animals. Cattle can be guarded (in night corrals made out of thorny shrub branches) on the fields that have to be fertilised, but the manure of small stock has to be gathered and brought to the field. The construction of a corral is too much effort for only a small number of cattle. Of those that do not use the natural fertiliser they posses in the form of their animals' dung, only seven have more than 10 animals. All these (except for two women) have access to a large area of land, but in three cases this land has to be shared with quite a number of family members (the other two times only with two or three people). For all those with only a small number of animals (43 people) land surface varies, just like the number of people to share it with.

Table 7.3.2 *Animal ownership and the use of the dung of those animals*. Number of people (men or women) who own animals and number thereof that use the dung. Total number of people using the dung of their own animals is 15.

	1 - 3 cattle		4 - 6 cattle		7 - 10 cattle		11 - 99 cattle		More than 100 cattle	
	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung
Men	7	0	4	0	3	3	5	5[a]	2	2[a]
Women	8	0	1	1	0	0	0	0	0	0
	1 - 3 cattle ruminants		4 - 6 cattle ruminants		7 - 10 cattle ruminants		11 - 99 cattle ruminants		More than 100 small rum.	
	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung
Men	10	4	14	0	7	1	11	7	0	0
Women	9	0	5	0	4	0	1	0	0	0
	1 - 3 animals		4 - 6 animals		7 - 10 animals		11 - 99 animals		More than 100 animals	
	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung	Owner-ship	Using dung
Men	12	4	15	0	6	1	12	7	2	2
Women	9	0	6	1	4	0	2	0	0	0

[a] = One owner with 25 cattle and the two owners with more than 100 cattle who use their animals' dung do not have any arable fields but improve their *pasture* area using manure (NB. They are not Bana, but Fulbe).

Table 7.3.3 Ownership of TLU and the use of animal dung

TLU owned	Number of owners	Number of users of dung
0.1 - 0.6	28	3
0.7 - 1.3	18	1
1.4 - 2.0	9	1
2.1 - 2.7	1	0
2.8 - 4.8	7	0
4.9 - 9.9	4	2
10 - 19.9	4	3
20 - 29.9	0	0
30 - 49.9	1	1
50 - 90	2	2

In short, the use of either chemical or natural fertilisers is not determined by the need of the fields itself, or the ownership situation of the actor with regard to the fields. Instead, it is limited to the richer inhabitants of the village (in money or animals respectively) and especially to higher numbers of cattle. Poorer people just wait and let the soil weather to fertility in a natural process. The only woman that uses animal dung possesses four cattle that she keeps near the house. The rest of the women, with small numbers of cattle, have their cattle further away in the herd of a brother or uncle.

Of course, household waste is only used on fields surrounding the compound, but the higher fertility and humidity because of organic matter content is taken advantage of by cultivating maize which matures more quickly. Most inhabitants have fields around their house as well as far into the bush. Fields in the bush means that the farmer has to walk distances of up to an hour. Small numbers of sheep and goats are not herded so far away.

Technological equipment to improve the yield mostly consists of ploughs and animal-traction weeding equipment. In the year 2000, 34 % of the inhabitants of Oudda owned a plough[59]. This proportion increased rapidly as more people tried to buy draught animals and the accompanying tools. The long distance from the compound (and compound fields) to the bush fields is a setback for the use of ploughs. Carrying a plough that far is a heavy job, even on a donkey's back.

Labour input can be used in the cultivation season to increase the surface of the fields harvested and thus the harvest as such. Some farmers (men and women) hire extra labour to plough, weed or harvest and pay the people a salary. However, mostly the work is carried out in mutual working parties where good food and drinks are served (see also 'social investments'). The majority of extra labour is used outside the rainy season. First, there are field owners who try to improve their land by building small stone ridges, just before the rains will start, to combat water run-off. The majority of such dikes are in the vicinity of Bariki and only on the steeper parts. Of all the respondents, only three mentioned the fact that they use this method[60]. The second and most important labour demand in the off-season is for the preparing of new fields. Because of the long fallow periods, this requires the cutting of big trees and dense bushes. As far as women are concerned, new fields mean the hiring of manpower and

[59] Substantially more than in Dzambou (20%; see chapter 6).

[60] Only one of these had erected lines of stones on some fields that were not really steep.

they therefore need to save money beforehand. Sometimes their husbands and (grown-up) sons help with the cutting of big trees.

Nevertheless, the clearing of such dense forest is a job that people are glad to postpone. A period of decision-making can be prolonged by the sowing of beans in the less fertile soil. Beans are less demanding, and what is more, as a leguminous plant that binds air nitrogen at its roots, it even improves the soil in the meantime. In Oudda nobody cultivates beans in order to fertilise the soil. Many respondents are not even aware of this property of beans.

Quantity of land investments

Apart from ameliorating the quality of land, a higher production can be achieved by cultivating more fields. This can be done by borrowing, hiring or buying land. One generation ago there were only two people that bought land, this generation the amount of buyers has increased and a lot more people indicate that they want to buy fields to counter a future lack thereof (see Table 7.3.4). Indeed, 43 % of respondents fear such a shortage of land in the future[61]. Some respondents refer to the land market in Oudda as the most important economic activity at the moment. But land prices vary tremendously depending on location and fertility, as well as on arbitrary factors that are not retraceable (seeming to be just what people ask or are prepared to give)[62]. There are also still people who want to borrow.

Table 7.3.4 *Number of respondents who bought, rented or borrowed fields or want to do so.* (n = 125). The numbers 'want to' do not represent those who already implemented the involved category (although they want to continue)

	Bought	Rented	Borrowed	Want to buy	Want to rent	Want to borrow
Men	7	6	5	13	2	5
Women	0	2	6	9	0	4[a]

[a] = one woman only wants to add to her fields by asking if she is chased from her actual Jiksa-field

The clearing of old fallow referred to can also be seen as the extension of land quantity. After decades of fallow rotation in the vicinity of the neighbourhoods, Oudda-ers suddenly decided to return to the age-old fields of their ancestors which are now secondary forest. As mentioned above, the reason is the exhaustion of their other fields.

Another option is to leave the Oudda territory and search for land elsewhere. However, of the small number of sons who have indeed left Oudda (6 %), none did so to find more and better land. The same applies to the previous generation. A handful of brothers of respondents (8 %) have left Oudda, but mostly to live with family in a neighbouring village or to try their luck in a city such as Maroua or Yaoundé.

[61] 49 % of men and 33 % of women; 9 % of men and 7 % of women consider the number of fields sufficient.

[62] The rental price of a field can vary between 2,500 and 15,000 Fcfa/ha or a proportion of the yield (from a small bin with grains up to a whole bag). Purchase prices are between 100,000 and 200,000 Fcfa/ha (or, as the respondents state: "per field"), while 20 years ago the same type of field cost 'only' 40,000 Fcfa (the Fcfa then was worth more than 2 times its current value), a goat or a large '*boubou*' (that is a man's dress).

7.3.2 Human domain investments

Health investments

During the dry season, several neighbourhoods invest in the digging of new water wells. In 2001, for example, Hlaka organised digging parties at two different locations. One of the reasons is the distance to the wells dug in the past (situated in the older neighbourhoods). But, a more important factor is the dependency on natural pools or rivers that do not guarantee hygienic drinking water throughout the year. With the help of hydrologists from the PDRM[63], the inhabitants determine the best place for a well and make a schedule for all men to participate in digging to a depth that hand-digging cannot be employed anymore and machinery has to be used. This same institute is approached every second year and is asked to disinfect contaminated wells with chlorine. The conglomerate neighbourhood *lawan* and his staff co-ordinate this kind of work to make sure that all wells are treated, albeit separately, so that a well is always at hand[64].

Next to that, several grown-ups try to inform their children as to how to use the wells properly. They keep cords and buckets separately and do not let their children meddle with the water jar at home. In addition, Christians and Muslims pay attention to hygiene in relation to meals (washing of hands before touching the meal) and their bodies. The new religions within Oudda have resulted in the introduction of the custom of tying up the flock within the compound during the night and not letting them roam the house and deposit their droppings everywhere. This has increased hygiene levels, especially with regard to small children.

A health-related activity that is also organised at community level[65] is the vaccination of children. Parents are highly motivated for this. When the news spreads that nurses are in the village centre to carry out such vaccinations, mothers and their young children start out on the journey from the outlying neighbourhoods to the vaccination post.

If they feel they are suffering from one illness or another, the Oudda inhabitants invest both in visits to the traditional healers as well as in visits to the regional hospital in Guili. In some compounds the income of one of the wives is almost totally dedicated to medicines and hospital visits of family members, instead of letting people suffer and die. Time is also invested in ill family members or friends. Husbands accompany their spouses to the hospital, sometimes for days, even if this interferes with agricultural activities. Fathers and grandfathers as well as mothers do the same with their children.

For eight years now, the Oudda-ers have been trying to set up a medicine store in the centre of the village to bridge the rainy season blockade to the Guili hospital. One of the inhabitants knows a little about modern medicines and is willing to act as a pharmacist. However, the lack of good contacts with higher level authorities appears to be a major hindrance. Official permission is required for such a store and although the village chiefs ask again and again both the mayor and the sub-prefect have not granted anything up till now[66].

Educational investments

Most parents try to send their children to school. Both State administrative functions as well as trade are mentioned as goals to be reached with a more ‘open’ mind as a result of education.

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63 *Projet du Developpement Rurale Mont Mandara*, see also chapter 6.

64 A well treated with chlorine has to be covered and left un-used for three days.

65 Instigated by WHO initiatives.

66 After the municipality elections of 2003 hopes declined because the new mayor is no longer a Bana. “Why should a mayor from Tchévi do what a Bana has neglected?”, the inhabitants of Oudda ask.

The village pays two 'voluntary' schoolmasters. That is, in addition to one government-paid director of the primary school in Oudda Centre, two more classes are led by village-paid teachers who do not always have a real teacher's education but have at least finished three years of secondary school. In the case of Oudda, one of them even finished his College of Education. The number of pupils in a classroom increases to over 100 so the parents complain about the lack of education quality. All of them are very content with the new College of Education in the department's headquarter Mokolo. Today, women choose to use their income to pay for their children's school fees. In one case a young woman even spends her household earnings from beer, fritters and chicken breeding on the education of her husband at the College of Education[67].

The village has already invested in education in the form of the parent teachers. There are others who want to send their children to school but do not have the possibility to do so. Sometimes the fee is too high, sometimes the husbands do not agree and sometimes the school is too far away. Several of them are trying to overcome the problems through 'lobbying work'. Women try to persuade their husbands of the importance of such an investment, and sometimes even offer to pay for the education of their children themselves (sometimes even then husbands have to be persuaded). People in outlying neighbourhoods have started discussions about the setting up of a school in their neighbourhood. Some are trying to get the school to accept a lower fee for those who are very poor, but the parent teachers are already complaining about their low wages. In December 2000, they even organised a kind of strike for several days to make their stance[68].

Table 7.3.5 shows that 22 % of the male respondents (n = 82) received some sort of 'western' education and only 9 % of the women (n = 43). All the people who themselves attended school plus some of the non-educated people want their children to attend[69]. Some of them have indeed sent their children to school, but in other instances this is not yet possible because the children are not old enough. Surprisingly, those who sent their children to school are seldom the same people [70] who said that they consider a school education to be an important asset for future jobs.

Table 7.3.5 *School attendance* (number of people that visited school or sent (want to send) his/her chil dren to school)

	Primary school	Secondary school	Tertiary school	Koran school[a]	Not available then[b]	Want to send	For future jobs
Men self	12	6	0	4	6	n.a.	6
Women self	4	0	0	0	0	n.a.	0
Men: kids	16	4	1	2	3	43	25
Women: kids	9	0	0	0	n.a.	25	9

[67] This strategy of sharing and mutual investment between husband and wife is very exceptional.

[68] After a couple of days, they decided to go back to work, because only the children suffered from their action; parents would not (and could not) pay more, and in this period of the year the teaching did not interfere with other obligations or possibilities.

[69] It is not possible to simply add up the numbers of the men and the women who sent their children to school to arrive at a total number of children attending because these are sometimes the same children (some of the interviewed women are married to the men interviewed, but this was not always the case).

[70] Only four of the twenty men that sent their children to school mention the importance thereof for a job, and four of the nine women.

7.3.3 Economic investments

Investments in cash crops

Groundnuts and beans are typical cash crops, although a small quantity is used in the sauce. Both men and women cultivate these two crops. It is not surprising that the inhabitants want the price of groundnuts to be high and that of sorghum to be low. The real price that farmers get depends on the supply and that itself depends on the rains as well as on the cycle of production that seems to exist. This cycle means that during the year in which the price of groundnuts is high, people decide to grow groundnuts for the next season, as a result of which the supply is abundant and the price goes down and vice versa.

Women can sell their surpluses like the men do at the regional market in Guili or use them to make local beer or fritters to sell at the local markets or in the neighbourhood centres and houses[71]. The women use Bambara groundnuts (*Vigna subterranea*) as well as 'souchet' (*Cyperus esculentus*) as an added source of income[72]. Bambara groundnuts bring in approximately 500 Fcfa per kg. With a mean production per household of 150 kg (see Table 7.2.9), a person can earn 25,000 Fcfa per year.

Some farmers earn extras from the cultivation of sugar cane, sweet potatoes and manioc in gardens surrounded by thorny bush fences. This can mean an extra income of 12,000 to 400,000 Fcfa depending on climatic circumstances and the size of the cultivated area[73]. The people who have access to low lying fields try to cultivate rice when the rains are good. However, the harvest is generally not sold but added to consumption sorghum and used in the Ramadan flour-drink that is consumed first thing after sundown.

Investments in farm-animals

As is the habit in the whole of Sub-Saharan Africa, animals are used as a bank deposit. A surplus of money is invested in sheep, goats and, when possible, in cattle. There are not many people in Oudda who deliberately breed animals to earn additional income, except the Fulbe. But these complain about a lack of pasture. Because of that, they have to sell more animals than they would have done otherwise. Also because of there being too many cattle (the Bana keep more cattle now than in the past, the Fulbe say) and thus more frequent outbreaks of disease, their herds are diminishing, they say. It is nevertheless still their way of life and the only investment route they know.

Because of the proximity of Nigeria, cattle trading is a profitable activity. Nigerian merchants visit cattle owners at home, during the evenings, because they want to smuggle the herd over the border and therefore offer good prices. At the same time, this avoids payment of official taxes on cattle transactions. The official route via the Guili market is only followed for slaughter animals. These fetch higher prices: up to 120,000 Fcfa for a healthy looking, young bull.

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[71] Most women are saving (in yield or in animals) to pay their sons' bride price or their daughters' hope chest. Women do not have land of their own, but use that of their husband. Thus, in the event of divorce they depend on their sons or fathers for cultivating or even for having a place to live. Thus, they usually remarry quickly.

[72] *Souchet* is a very labour intensive product, especially during the harvest, and requires high soil fertility. Mostly producers add fertiliser to the field. As a result, field owners are very willing to lend out a field for *souchet* production for one year.

[73] Several people who earn between 20,000 and 100,000 Fcfa (= 30 to 150 Euro) from sugar cane and manioc, call the surface area used "a small field".

Despite the losses of chickens due to contagious diseases, every year people try to start breeding them again. Agricultural extension workers put a lot of effort into persuading the owners - and enough owners at the same time - to vaccinate their birds. People also keep ducks and these may be used to add to the household protein supply or to generate income via sales at home or at the markets.

The village has no real small ruminant market. On the other hand, someone in trouble will sell his animals (10 % of respondents indicate that they will use their flock for such calamities) and people who have earned money do buy goats or sheep. In 2001, 57 of the 125 respondents possessed small ruminants, mostly goats (with a range of 1 – 36). Almost all transactions take place at household level. Only a very small number of small ruminants are traded at the Guili market. Even the week before the 'sheep festival' of the Muslim community, a time that sheep prices in the rest of the Far North have increased sharply, the number of small ruminants there only increases marginally[74].

One of the main by-products of cattle is their milk. In Bana society, however, this is not a real economic commodity. Cow owners, mostly the male household heads, decide on what happens to the milk and usually they give it to the children. During the dry season they allow only the calves to drink it. If the herd is not in the neighbourhood of the cattle owner's house, the actual herder can use the milk for his household. Kapsiki cattle produce less milk than Zebu, but as regards the latter Dietz *et al* (2001: 197) mention an average yearly production of 400 litres for human consumption. To fulfil the calorific requirement, an adult has to drink 1140 litre per year. This means that a Bana household can meet its energy needs with 17 zebu cows or 28 cattle as is the case with twenty Bana households and ten Fulbe households in Oudda[75].

Investments in non-agricultural options

Off-farm investments

The villagers search for possibilities to minimise the dependence of their children to land. As stated in section 3.2, 'Human domain investments', education is a much favoured (although not widely practised) option for acquiring off-farm jobs. This approach was not very successful for the current generation, however. After the economic crisis at the end of the 1980s the possibilities for becoming a (well-paid) civil servant diminished tremendously. This does not stop today's parents from hoping for such a job for their offspring. Half of the interviewees (men and women) even wanted their daughters to be highly educated (university education was even mentioned a couple of times). Everybody knows of a success story of a family member or neighbour literally swimming in luxuries in town. On the other hand, youngsters with at least secondary school education have the experience that they had to return to the village and start cultivating again due to a lack of State appointments. However, even (or especially) they want their children to be educated. "This time of hardship cannot last long" and "The government knows that they have to come up with more paid jobs to enhance the development of Cameroon", are variations of hopeful phrases heard every day.

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[74] At this same market, just after Christmas, the price of a healthy looking, full grown, male sheep is 20,000 Fcfa.

[75] Some of those 20 households possess Kapsiki cattle, but then in higher numbers, so the required milk production is still reached.

When trade is mentioned as an opportunity to earn money, it is not the small supplementary commerce with minor products such as a bit of sugar, soap or salt, mostly smuggled from Nigeria that people have in mind, but the real traffic, like that of the big salesmen that visit the market in Guili, or even Garoua or like the village chief of Oudda, Ardou Hamadou, who travels back and forth to Maroua with his '*pagnes*' (cloth) on his bicycle. Nevertheless, the small-scale trans-border trade can become a stepping stone to something bigger and can offer a platform for some of the young men to start investing.

The Bana are not a very outward moving ethnicity. Although several young men have attended high school outside their own village, most of them return (especially when they reach marrying age or when their fathers become widowers and need looking after) and they do not then leave again. Only a very small number of them are daring enough to become involved in migration labour in Nigeria where the harvest of white sorghum takes place slightly later than in Oudda, or in the region around Maroua where the harvest of transplanted sorghum demands some extra labour force at the end of January.

Some of the young men try their luck in cities, such as Garoua, where they perform small trade, hire themselves out to rich inhabitants as guards, or become street bandits (this was mentioned by two respondents with regard to sons of neighbours or other villagers). However, most of them return home without any benefit from their investments.

On-farm investments

Some individuals stick to more traditional occupations. Naikwa, a 40 year old farmer with 5 sons, braids grass mats (for the market) and granaries (on demand) and teaches his skill to his children to avoid problems which may arise due to a lack of fields. "At the moment I could live from those grass products alone". A granary costs him four days work including the cutting of the grass and earns him 6 to 8,000 Fcfa. A mat is less work (half a day) and generates up to 1,500 Fcfa[76].

Traditionally, women earn money from processed agricultural products. They make '*bilbil*' and 'wine' out of sorghum and fritters from bean flour, groundnut paste or a mixture of these with sorghum flour[77]. All these products are sold at local markets[78] in the village or in Guili

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[76] Normally the price of a bag of sorghum (100 kg) starts at 5 – 6,000 Fcfa at the moment of harvest, increasing from 8 or 9,000 Fcfa in December to 14,000 Fcfa in the rainy season when there is increasing scarcity. At the Guili market, a bag of groundnuts fetched 16,000 Fcfa in December 2000 compared to 30,000 Fcfa the year before. All depends on the results of the last harvest: for example the bad rains of the end of the rainy season in 2000 caused the price of sorghum to rise to 12,000 Fcfa in December and as high as 22,000 Fcfa in the beginning of July 2001. The low groundnut price in December was due to a good harvest and the fact that many farmers had grown more fields with this product than in other years, because of the extremely good price acquired in 1999. By way of a comparison, in Guili a good quality *pagne* (a piece of cloth to make one whole dress) costs 6 – 9,000 Fcfa (Dec. 2000). Because of the coincidence of Christmas and the end of the Ramadan, which both lead to greater demand, this price was higher than usual.

[77] The home-made dough is taken to the market and the fritters are baked at the spot in groundnut oil.

[78] Baliwol II and Bariki have their own weekly markets (on Wednesday and Sunday respectively), but at the junction in Baliwol I, where the motorbikes and sometimes vans stop for their clients, there is a kind of very small, roadside day market for sugar cane, fritters etc, next to a small shop with soap, sugar and even coca-cola.

town[79]. The benefits are not only used for sons' bride-price and daughters' hope chests[80] but, as has been stated above, for school fees as well (if the fathers consent).

7.3.4 Social investments

As mentioned in Chapter 3, to measure the total social capital and investments therein demands more research time than could be spent during this study. Therefore, I will only provide some indicators and examples of social bonds and linkages as well as the rules and norms springing from them that are present or 'under construction' in Oudda.

Investments in family and friends

Investment in family networks is a natural course of action in Bana society. Although there are some young men who escape the social pressure of their fathers and uncles, this is met with surprise and disapproval by the rest of the community. Most of the time fathers and mothers help their sons with bride prices, and their daughters with their hope chests. Children are respectful and help their parents when they are still at home. When married, sons are going to live in the house or at least the neighbourhood of their father. New wives take turns to prepare household meals. In a way, you can say that young couples look after parents, especially when these reach old age. If they live next door, they share a lot of small meals and small labour tasks. The post-harvest work of groundnut peeling is done in companionship of others, mostly neighbours, and thus (also) family. Everybody present helps all the others present. Parents-in-law are not forgotten either and mutual visits are paid and small gifts exchanged. When old, both widower fathers and mothers without husbands can live with their married sons. On the one hand it is a kind of pay-back of the care and help given when the children were young. On the other hand, this custom makes people expect that their effort in looking after their parents will be made up for by their children when it is their turn.

Some fathers try to make a real profit out of their daughters by 'selling them off' to the highest bidder. Occasionally, they even take them back from one husband because another offered more. But this is an exception and even though daughters are unable to stop that, such fathers weaken the bonds with their offspring and sons-in-law. They apparently choose a more cash-based security.

Help in agricultural activities is also mostly organised via kinship ties. So-called working parties are held with friends and co-wives, but the core of such groups consists of family members, like sisters, nieces, aunts, etc. for women, and brothers, nephews and uncles for men. Of course helping somebody means you can expect him (or her) to help you later on. These parties are a happy event, with good food, drinks (traditional beer) and lots of laughter.

For younger men, the school is also an ideal place to form a group. Especially those that visited secondary school together stay friends forever. Being away from home and spending years caring for each other in a strange environment resembles the old initiation rites that

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[79] The big market in Guili, every Saturday, attracts people who want to buy and sell their products (groundnuts, beans, sorghum, clothes, 'pagnes' (the cloth to make women's wear), meat, sorghum beer, etc.). They come from the surrounding villages as well as from further away. Those from further away are bigger traders who buy the agricultural products from the region or try to sell luxury goods such as radios and watches. Even Nigerians join in the sales, but they are taken away by the police if discovered.

[80] In Bana culture a man has to pay a dowry to the father of his bride. If possible, his parents try to help him with that. On the other hand, when a daughter marries, she needs household utensils, like pans, saucers, mugs. Female relatives, especially the mother, have the duty to give her such useful gifts.

formed the same age groups[81]. Back in the village, they invest in the continuing of these relationships. They still look each other up in order to drink a beer and play a game of "*ne t'en fais pas*" under the gathering tree in the neighbourhood centre. In these 'old boys networks' they can find assistance during harvest 'parties' and in hard times. When one of the younger, more educated men was successful in trading, he was accused of treachery. The case was submitted to the *lamido* during one of my stays in the village, January 2003. His former school friends helped him out, proving he was not a treacherous person at all.

Each neighbourhood forms a group that provides direct help when needed. Elder people without the strength to labour are given meals and other material help, as well as assistance with roofs, etc. When children become orphans it is not necessarily the family that takes them in. Sometimes neighbours look after them. Moreover, when older boys develop some problems with their parents at home (mostly based on puberty issues) neighbours can decide to give them a place in their compound (for the time being). All these investments in mutual aid strengthen the social fabric of the village and secure the inhabitants of help in times of need. Indeed, the moment a fire destroyed a hut and the sorghum stock of one of the inhabitants in the beginning of the year 2001, all neighbours came to rescue what could be rescued and to help build a new stock and a new hut. When I asked why they did that, the answer was that "you can have a disaster yourself and nobody will help you when you do not help others".

To measure social bonds and who invests in which bonds at all, the pattern of hiring and lending draught animals can help. This pattern is depicted in Table 7.3.6.

Table 7.3.6 *Source of plough and draught animals used* (in numbers of respondents; n = 125; 82 men and 43 women)

		Own	Borrowed of father	Borrowed of husband	Borrowed of another	Hired	No plough (hand)	No information
Plough	Men	39	7	0	12[a]	6	10	9
	Women	4	0	26	3[b]	2	4	4
Draught animal[h]	Men	39[c]	7	0	12	6	n.a.	9
	Women	4[d], [e]	0	26	3[f]	2[g]	n.a.	4

[a] = 2 times from a brother; 4 times from a boss (e.g. the owner of the grain-mill where the respondent is the employee); 1 time from the field-owner; 5 times help in exchange
[b] = 2 times from son
[c] = 2 times an exchange: the one owns the donkeys or cattle, the other the plough
[d] = 2 times cattle; 2 times donkeys
[e] = 2 times only one animal in ownership, the other from husband
[f] = 2 times donkeys, 1 time an oxen and a horse
[g] = 1 time donkeys, the other time donkeys or cattle
[h] = in total 57 times donkeys and 41 times cattle were used

The majority of farmers use their own plough and draught animals or that of their husband. For men, borrowing (half of the times from family members, half from others) happens three times as much as hiring. If we do not count the borrowing from husbands, hiring or borrowing by

[81] The custom of initiation is slowly disappearing. Men older then 50 still count their age in years after the initiation and have some ties with their age group members. The younger the men, the less they have been subject to initiation rites.

women occurs just as often. People who hire do not generally have family members or friends with enough ploughs and draught animals to be used by more people. In general we can conclude that most of the Bana are rich enough to possess ploughs and animals for labour and that commoditisation of these is not (yet) widespread. In addition, those without such equipment can easily borrow it, either from family or from other villagers[82], but that depends on the social circle one belongs to. Investing in kinship or friendship ties helps to acquire access to such cultivation equipment. Lending out a plough, on the other hand, means investing in those ties and therefore in future access to help.

Weddings and burials are important moments to strengthen kinship and friendship ties. Each death has to be commemorated with days of mourning at the house of the closest kin. Both friends and family, from near and far, visit the compound and bring *bilbil* or food, consume drinks and meals and exchange warm feelings and information. At weddings as well, visitors have to be accommodated, food is shared and a kind of party with music and dance is held[83].

Political investments

The socio-political organisation of Oudda rests on different levels of authorities. At the lowest level each neighbourhood has its own chief who has a role in conflict mediation[84] and in the bringing together of men to discuss village issues and attempts to implement the required measures. He performs these duties with the help of a special counsellor and other neighbourhood elders who inform him about ongoing processes and important circumstances. For example, in the Hlaka neighbourhood, inhabitants decided to dig two more wells in the dry season of 2001. They came together in the house and at the request of the neighbourhood chief. There they organised a digging scheme (each in turn) and the chief saw to involvement of the extension organisation that can measure the water depth and can offer building materials later on. A neighbourhood chief is democratically elected (although mostly he comes from the chief's lineage) and he has to provide his fellow villagers material and immaterial goods. The position gives him a considerable status in the village as well as in the wider region. To make up for the time spent at the gatherings and on arbitration, chiefs have several privileges, such as first choice when an animal is slaughtered, free beer on certain occasions, etc.. Moreover, outside the village they encounter fewer problems with police officers checking their identity papers or the origin of (smuggled?) merchandise. In the past, village and neighbourhood chiefs could depend on their subjects being available for free for a certain number of days to work in their fields (or to help with the clearing of new fields) but that tradition "has disappeared with the democratisation of Cameroon", as the brother of the neighbourhood chief of Bariki told me. The presence of a neighbourhood chief makes the position of the neighbourhood stronger *vis-à-vis* other neighbourhoods and, especially, higher authorities. He is the official representative. Some neighbourhoods did not have a chief during a certain period and they felt their position weakening. Quarrels were not solved and disputes with inhabitants of other neighbourhoods were judged in the favour of those who did have a chief. So, both for the internal organisation of the neigh-

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82 Most of those who work by hand (without a plough) are old or sick and do not want to cultivate more.

83 This is not repeated each time a women remarries. Only the first time is a reason for a real party. Moreover, dance is not a custom in the Islamic religion, although some Bana Muslims mingle their new habits with the old ones and do celebrate their wedding in a more traditional way.

84 Gains per case rarely exceed 500 Fcfa.

bourhood as well as for the position of the neighbourhood in a wider context, villagers are willing to invest in small presents and services to their '*Ardo*' to make him stick to his role.

This same organisation and position is also present one step higher, at the level of a conglomerate of certain neighbourhoods. Mostly these chiefs have inherited their position from their fathers who governed the same territory in a time that it was only one neighbourhood. They already fulfilled this job when Guili did not have its regional headquarter function and when, therefore, no *lamido* resided there. These chiefs are counted on to know the important issues (for example of the history) of the village and as such can represent the interests of the village even better than the lowest level chiefs. When the *lamido* in Guili wants to know something about the village or wants to consult his subjects of Oudda, he invites the higher level chiefs. These are free to bring along their advisors, some of which certainly will be the neighbourhood chiefs.

Party politics in the sense of influencing people's election preferences is no issue in Oudda. People do not feel attached to a specific ethnically based party that could better represent their interests at the State government or provincial level. Even a 'Mandara mountain-based' political party does not exist. The Bana are such a small group, it is better to be seen and to behave as a Cameroonian. They do not trust official State authorities, but they consider the RDPC is as good as any other party and perhaps even better because "Biya is in power so long now, he need not enrich himself any further. With a new president you risk predatory behaviour", as several men in Oudda assure me. In addition, they are grateful to Biya because "he abolished intra- and inter-group violence". "When I was young I could not go from here to Guili, because of the risk of being taken as a slave by a neighbouring tribe", several older villagers explain to me[85].

But that was in the past. Nowadays "it is not possible to understand what those 'Yaoundé' people are doing" and "they have forgotten that we exist". Even the mayor of the municipality to which Oudda belongs is far away. Until 2002 he was a Bana but, like the sub-prefect of Bourah, he never visited the Oudda area. During the 2002 municipal elections, a RDPC member from Tchevi (a village south of Bourah) was elected mayor and, as a result, Oudda inhabitants are even further removed from the authorities.

Once again, an investment in the relations with the village and regional chiefs is more important. As far as is necessary, Oudda is ruled by the neighbourhood chiefs and the *lamido* in Guili. It is to this latter person that the Oudda-ers pay their taxes[86] and to him they pay homage on, for example, Christmas day (although for him as a Muslim this is not a very important religious occasion). They expect him to stand up for their rights in cases concerning higher levels. With that in mind they are willing to let him decide what is good for the development of their village, if they consider such a task to be beyond their own reach. Also, it is to him and his noblemen that they can turn in cases and conflicts in which the local chiefs are powerless.

Nevertheless, some people are active in politics. Some are members of the RDPC women's group that promotes women's consciousness regarding their rights, birth control and other relevant issues. Others sit on the Oudda RDPC board or are just party members. Within the party they try to influence local governance but do not go beyond the discussion stage. They do not dream of putting pressure on anybody. They say that their political activities earn them no

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[85] Interviews December 2000 – January 2001.

[86] Collected by the neighbourhood chiefs. In the past the *lamido* did not offer any money to compensate for the work, but in 2001 he promised to pay the chief 2-3,000 Fcfa when he brings in the taxes.

more than a dress (with the RDPC signs or the portrait of Biya on it). However, their involvement does provide them with an extra group to fall back on in times of need and sometimes (although very rarely) it gives them access to higher level decision-making institutions and people. Yet, it has to be stressed, that this is not the reason for doing this work. It is more or less the other way round. If a certain family is involved in the RDPC, you have to be involved in politics in order to become or stay a full and valued member of that family.

Conflict mediation

In Bana society the village chief also used to serve as arbiter in the event of disagreements. These could be arguments about field boundaries, crop damage by animals, fights between youngsters or (co-)spouses, discords over bride price and the paying thereof, etc. Here again the region chief, the *lamido* (or his court) has to help when the lower authorities cannot solve the dispute. Nowadays, the State has installed agricultural and animal husbandry line officers and an official commission to deal with quarrels about land and crop damage (see chapter 4). The first step then, is to inform the agricultural line officer, who visits the field and estimates the damage (or the boundaries). This will then be converted into an amount of money that the cattle owner has to pay or into an order to a perpetrating farmer to withdraw from a field. Discords over this decision are brought before the commission, of which the sub-prefect is the president[87]. In Oudda, a village-based representative of the agricultural line officer and a district based (in Guili) representative of the animal husbandry line officer have to be addressed.

Inhabitants of Oudda choose their own strategy to respond to crop damage or other conflict causes. Some of them (and most of them most of the time) only address the perpetrator and do not contact any authorities at all. They tend to think that the amount of money and gifts that have to be paid are not proportional to the chances of winning a case. This is even more so, they think, because the perpetrator of the crop damage can always give cattle and that is worth more than anything a cultivator can give. Others use the traditional hierarchy of neighbourhood chief, conglomerate chief and regional chief, but never seek access to the administrative lines, let alone the official judiciary system. Still others only complain to the Mayor (although he is far away in Bourah) and bring the captured livestock along as evidence. This strategy means they are sure of not getting any reimbursement themselves, but it does at least guarantee that the owner of the animals has to pay for the involvement of this public servant and the costs of keeping the 'imprisoned' animals overnight. This, according to actors with this strategy, makes people look after their flock more carefully and therefore prevents future damage.

In the event of discords between farmers and Fulbe (or other cattle keepers) within one village, apart from village chiefs, the *lamido* can always act as mediator because both parties acknowledge his authority. Most of the time he sends one or two of his noblemen to assess the situation in the field and to decide what has to be done. When the people involved do not agree with the noblemen's decision, they can appeal to the *lamido* personally. In a kind of court session (lawsuit), all the parties are heard, wise men can add information and the *lamido* decides who is to blame and what has to be paid (both to himself and to the winner of the adjudica-

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[87] Other members are the same line officers, the commander of the regional police corps, the regional chief (the *lamido*) and, where necessary, the line officer of forest affairs.

[88] Interviews with Oudda-Bariki and Waliwol Kordraweshi inhabitants (see figure 7.3) during field observations of the Boubakary Néné pasture borders in January 2001 (see also note 63 in Chapter 8).

tion). The possibility of involvement of the *lamido's* noblemen means it is important to invest in good relationships with those men and their families. "The lamido always believes his noblemen, but they can give a report to their chief that does not match the truth. For example when you have quarrelled with family members of a nobleman, who live in Oudda, next time when you need an objective statement about the borders of your field, this nobleman will give an account that favours the person that wants your field."[88]

For people vulnerable to village jealousy or over-zealous policemen, it is wise to invest in a good relationship with the *lamido* himself. Young men who try to set up (trans-border) trading need the *lamido's* support in the event that they fall foul of the authorities (or co-villagers) and will visit the *lamido's* court now and again to pay him their respects and give him (small) presents.

Cultural investments

The rise of 'new' religions has led to group formation along those lines. The Catholic Church helps its promising members with educational opportunities. This attracts youngsters to become active within the church, binding them not only with co-believers in Oudda, but also with Catholics in Guili, where the church has its centre and where mass is held. In the Protestant churches (two types of Lutheran Brothers) also activities for the young ones organised by the adolescents - like a choir, Christmas celebrations with theatre and bible knowledge quizzes, etc. - strengthen group bonds. Once you have become a member of a church you remain a member of that group long after you have stopped practising Christianity actively. Catholic men who marry a second or third wife may be barred from communion, but they continue to be member of the Catholic group.

The Islamic community functions at two levels. Men pray together in places delineated as 'mosques' and discuss religious and social issues directly afterwards. Bana Muslims form a group that provides a bit of mutual help in the event of problems. Despite their praying together and the performing of the other Islamic duties, they do feel more or less isolated from the Fulbe Muslims of their village because these "despise us, black men"[89]. A sign of the difference between the two groups, for instance, was that in 2000 the end of the Ramadan was celebrated one day later by the Fulbe than the Bana. For women, being Muslim does not help them become members of a special group. Women pray alone in a corner of the house. Fulbe women form a kind of group, but this is more ethnically related than based on religion. As is the case with the Bana women, their social network mostly consists of family and friends. As far as Fulbe are concerned, these family members and friends sometimes live far away in Garoua, Ngaoundéré or Nigeria.

Music is an important part of Bana culture. Both within all different religious meetings as well as in common free moments (in the evenings, or when visiting markets as a place of social contacts), 'professional' musicians or youngsters who are still learning to play the drums, violin or guitar, grace the gatherings and attract listeners. This again helps to form and maintain social bonds within and between groups. In the Christian churches, for example, music and

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[88] Interviews with Oudda-Bariki and Waliwol Kordraweshi inhabitants (see figure 7.3) during field observations of the Boubakary Néné pasture borders in January 2001 (see also note 63 in Chapter 8).

[89] This sounds dramatic, but in daily life this does not lead to major frustrations or the rejection by the Fulbe of their religious brothers.

singing is a lively way to connect people and to attract young members. Each of the two Lutheran brothers' groups of Oudda has its adolescent choir, led by a slightly older boy. They practise every Saturday evening and sing during services. Even young girls and boys from non-Christian parents want to join these 'age groups'. Moreover, a young player (son or nephew of the household head, or a neighbour's son) will soon be accompanied by others around the compound-hearth (even in Muslim families) who build friendship ties between them and with the host family.

In short, in the social domain investments are generally unchanged from what they used to be in the past. The Bana have a strong social fabric that can help them through difficult times. It seems as if some modern factors only add to that fabric. Investments with a view to maintaining these social bonds cost time (mostly experienced as 'good' time) and the sharing of material things. Individuals invest in special capabilities that can serve their community, like leading a choir, playing a musical instrument, or learning more about modern agricultural methods to inform fellow farmers.

Table 7.3.7 *Summary of current level, insecurities and investments in the domains of the 'insecurity com plex', based on 'capitals*[90] *of the village in total* (- = bad; o = moderate, + = good; in the investment column: - = no investment; o = a bit investment; + = a lot of investments)

	Average level of village	Situation of worst off third of pop.	Security (= expected level in future)	Investments	Investments details
Physical basis	o	o	o	n.a.	n.a.
Population.density	+	+	-	-	No real family planning
Land availability	+	-	-	o+	Various qualitative methods by small number of people; invasion of Jiksa-Kubadje
Commod. of land	-	-	+	o	Rising: more safe guarding by owners; inhabitants expect increase
Food production versus needs	+	-	-		Crop diversification; ploughs; etc.More discrepancy
Health	o	o	o	o	Rising, esp. when local dispensary arrives
Education	-	-	o	o	Rising; already more than in Dzambou
Cash crops	o	-	o	o	'Everybody' a bit; no sales development
Livestock	-+	-	-	o	Everybody tries, not really successful Fulbe inhabitants
Non-agricultural possibilities	-	-	-	-	Low scale; low technology; no real labour migration
Socio-cultural	o to +	o to +	o to +	o to +	Some increase of new systems (religions)
Political	-	-	-	-	Almost no linking with higher-up
Land allocation	-	-	-	o	Fear of loss Jiksa via national government decisions
Conflict resolution	-o	---	-o	-o	Not with other adm. entities within the village

[90] See Chapter 2.

In short, the bulk of insecurities does not concern the natural domain of the village, but rather the other three domains. The environment has a moderately safe status and population pressure is not very high. However, as regards the worst off third of the population, they suffer from a lack of land availability and a resulting shortage of food production. In addition, specifically investments in the natural domain are difficult, thus, future environmental insecurities may be feared.

7.4 Intrusion of other niche: Box 2

After descending from the hill tops[91] the Bana built their compounds first on the lower slopes and then moved further into the plains each time and finally some of them into the far bush. Once the general level of safety had increased, the grandfathers and great grandfathers of current inhabitants wanted to live in the middle of their fields to protect their crops against invading wild animals (monkeys, antelopes, ward hocks etc.). At the same time they did not want to live totally alone, with only their small family, so in remote areas they settled in small groups. One of those groups consisted of the clearers of the more hilly Jiksa region and they started to build houses there somewhere during the 1930s.

According to the Bana of Oudda, the Jiksa region lies at the same place as the (current) "Kubadje" neighbourhood of Kila, but with a wider north-south extension. Thus, it stretches over two km along the Kila-Oudda border from east to west. It covers the whole of Kubadje from north to south, but southwards it covers another 1 km that lies in official Oudda territory (see Figure 7.3).

Whether for safety reasons (such a small group of only three family heads formed an easy target for bandits *and* predator animals that abounded in those days) or because living conditions deteriorated (the Far North Province suffered from a drought period during the 1940s; see section 2.1.1 and chapter 4)[92], the Jiksa settlers turned back to the more central Oudda neighbourhoods somewhere around 1945.

After a generation of cultivation in the surroundings of the Baliwol, Bariki and Hlaka neighbourhoods, some farmers started to clear the bush of the Jiksa part anew, starting from around 1985 onwards. Although they did not consider the possibility of building houses, they did want to cultivate the fertile soil. They did not bother about the Fulbe who had settled there in the meantime and more and more co-villagers invaded the area in order to create fields.

7.4.1 Reasons for intrusion in the environmental domain

The most obvious reason to start a field in Jiksa is the fact that the family (or the individual) possesses land there, at least according to that family's perception and that of other Oudda inhabitants. This ownership-perception added to the idea that the soil in Jiksa had to be very fertile, after decades of being fallow and of being used by cattle. However, not all inhabitants who own fields in Jiksa actually use those fields. Table 7.4.1 shows where the fields of respon-

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[91] These hilltops are situated in the centre of Oudda, more or less between Oudda-Baliwol and Oudda-Bariki (Fig. 7.3).

[92] Some older inhabitants, for example the Fulbe chief of Guiki, talked about their more remote homestead where they lived when they were young and the fact that their fathers withdraw further and further towards the centre of Oudda because of a lack of water.

dents are situated and where they use fields. Of the thirty-three owners of fields in Jiksa only sixteen use (some of) their fields there.

Table 7.4.1 *Number of respondents that owns and/or uses fields at certain places* (n = 125) a = in Jiksa; b = around the house; c = in rest of bush; d = no fields possessed

Place of fields	a	a + b	a + c	a + b + c	Total (with fields in (use in) Jiksa)	b	c	b+ c	d	Total
Men(ownership)	5	15	3	11	34 (41 %)	4	11	27	6	82
Men (use of owned fields)	5	a: 0 b: 11 a+b: 4	a: 0 c: 1 a+c: 2	a: 1 b: 3 c: 0 a+b: 1 b+c: 3 a+b+c: 3	16	4	11	b: 6 c: 1 b+c: 20		
Women (use)	1	8	0	1	10 (23 %)	14	9	6	4	43

Explanation of this table: for example, the second row, third column shows that fifteen men own fields at two different places, being in Jiksa and around the house; the third row shows that of this type of owners no-one uses only his Jiksa fields (a : o); eleven use their fields around the house only (b: 11) and four use both types of fields (a + b: 4). The fourth row shows the place women use for cultivation while the third column shows that eight women use fields in both Jiksa and around the house.

Sometimes the use of the Jiksa area is inevitable. Whether others use it or not is the result of calculating the different factors (see Table 7.4.2). A lack of money, for example, that prohibits the purchase of other fields, of chemical fertilisers[93] or enough animals for animal manure obliges actors to search for those (own) fields that have a natural fertility, namely the Jiksa fields. This approach is weighed against possible disadvantages such as the distance or the fact that the Fulbe have to be disturbed.

Table 7.4.2 *reasons for use or non-use of owned fields in Jiksa (n= 34)*

	No reason	Only field	Rest infertile	Rest fertile	Too far	Disturb. Fulbe[a]	Sons use	Not necessary in Jiksa[b]
Use	7	5	4	0	0	0	4	0
Non-use	5	0	0	5	2	2	0	5

[a] = These two people do not want to disturb the houses of the Fulbe and/or the place of their fields

[b] = These five people indicate they are going to use Jiksa fields next year, because two of them have now grown-up sons, and 3 others have run out of possibilities for leaving land fallow outside Jiksa.

Although for the majority of Jiksa users, the reasons to use Jiksa-fields seem to be straightforward and seem to arise from natural circumstances, it remains to be seen whether or not these actors have other possibilities. Going to Jiksa in fact implies several disadvantages. First of all, the labour input to clear the fields there is very high. Because the forest has (mostly) had

[93] Apart from money, an important hindrance to the use of chemical fertilisers is the excessively late arrival of these fertilisers each year.

the chance to grow for more than a generation, and sometimes even more[94], trees are big and cutting them down is hard work. Also the removal of brush requires a lot of work. The actor needs to be very healthy, or he needs money to hire workers. Indeed, some older farmers leave the job to their sons (and not only the four that let their sons use the area (see Table 7.4.1 and 7.4.2)).

The second problem in Jiksa is encounters with cattle, donkeys and their owners. The animals cause damage to crops and the owners are not willing to pay any reimbursements. Thus, cultivating in the 'pasture' area needs to be accompanied by control and defence activities. Several respondents explain that they have to go down there every day, "even Sundays"[95] and have to stay out a long time to make sure the cattle keepers do not let their animals go into the fields.

On the other hand, the fact that more Oudda inhabitants cultivate in Jiksa at the same time means that they can share the patrols. And, they do not need to be so afraid of Fulbe aggression.

7.4.2 Reasons for intrusion in the Human domain

In general there are no health-related reasons that would cause people to choose for the fields in Jiksa. At best, health and life-cycle situations can help to overcome the disadvantages of cultivating in Jiksa. For example, those farmers that use or (next year) want to use fields in Jiksa, are all healthy people. As has been explained, people with poor health are unable to cut trees and endure the daily walk. Being young certainly helps in this situation. The mean age of users is 35 (range 22 to 59[96]), while the mean age of non-users who own fields in Jiksa is 47. This indeed shows that younger men in particular go to Jiksa to clear and cultivate.

Education may cause an opening of the mind to future problems and, as such, may direct people towards certain strategies. However, those young men that use their fields in Jiksa do not have a higher than average level of education (the percentage that attended school or schools at a higher level is no higher). So, for them education has not served as a triggering factor. Instead, more of them than the village mean have sent their children to school and certainly a higher percentage of them than of the group that owns Jiksa fields but do not use them (see Table 7.4.3). It therefore looks as if the reverse is true: those people that use Jiksa fields seem to have an open mind for the modernisation that is incorporated into education.

Table 7.4.3 *Number of owners/users and owners/non-users of Jiksa fields sending school-age children to school.*

	n	With young or no children	With school-age children; sent to school[a]	With school-age children; not sent to school
Jiksa field users	16	6	9 (90 %)	1
Non-users	18	8	4 (40 %)	6
Whole village	82	33	32 (66 %)	17

[a] = The percentages shown are percentages of the people with school-age children.

[94] Clearing the bush (during the clearing period of the grandfathers) often only meant that in a certain area two or three trees were cut and then the whole area was delineated as being the property of that person.

[95] Sundays are a day of rest for all inhabitants of Oudda, whether Muslim, Christian or followers of the traditional religion.

[96] The two users of over 50 years already cleared parts of the Jiksa bush when they were young.

The Jiksa users not only mention the necessity of other options than land for their children, but (if possible) they also do something about it. They themselves do not have any extra chances via education but they obviously do feel the pressures of land shortage and infertility.

7.4.3 Reasons for intrusion in the Economic domain

The same lack of money that prohibits the use of chemical fertilisers or the purchase of animals for manure also prevents people from becoming something else than farmers - such as traders or civil servants. For the purpose of the analysis, wealth will be defined here as the possession of animals and ploughs[97]. The possession of land is excluded from the calculation because it would otherwise lead to circle reasoning. Table 7.4.4 shows how many people in the three categories (users of Jiksa fields, Jiksa-field owners that do not use them and the rest of respondents) are 'rich' according to my definition[98].

Table 7.4.4 *division of wealth (n = 81)* with category percentages in brackets

	'Rich'	Not 'rich'
User of Jiksa fields	10 (63 %)	6 (37 %)
Owner, non-user of Jiksa	7 (39 %)	11 (61 %)
Other villagers	27 (57 %)	20 (43 %)

The Table shows that significantly more farmers are 'rich' that own and use fields in Jiksa than non-using owners or fellow villagers that do not own fields in Jiksa. Therefore, it does not seem likely that Jiksa fields are used because of a lack of other possibilities.

7.4.4 Reasons for intrusion in the Social domain

Most of the current users of Jiksa fields started using those fields some five years ago. This was directly after the *lamido* of Guili issued a kind of official statement about his territory and its boundaries. At the same time he granted permission to his subjects in Oudda to cultivate in the contested area. Although this was counteracted with objections from the official authorities in Mogodé, the farmers involved took the permission seriously because it came from their one and only chief.

Up until recently, other owners of Jiksa fields continued to look at the area as an insecure possession because the *lamido* is far away. It is easy for him to declare that the area be used because he does not have to deal daily with intrusive cattle keepers and resulting crop damage. These people doubted whether they should use their fields there. The arrival of the researcher and the related trips to the area to view the situation - the damage in fields and the position of the borders - as well as a visit to the Kila village chief and an on-the-spot discussion between the Kila and Oudda inhabitants caused even more remote Oudda-ers to become aware of the problem and to become involved in the struggle being fought out by their fellow villagers. As

[97] De Steenhuijsen Piters (1995) used the same indicators to distinguish rich and poor farmers in his study of the Diamaré production differences.

[98] According to my definition somebody is 'rich' if he possesses a plough and a pair of draught animals, a plough accompanied by a combination of 4 other animals (or 3 if a cow is involved) or if he has no plough but at least 3 cattle or 6 or more smaller stock in combination with a cow, or a combination of 2 cattle with 2 smaller stock.

a result, the owners emphasised the question of loyalty and made the *lawan* declare that he was in agreement with the *lamido*'s statement. The conglomerate neighbourhood chief of Bariki, Hlaka and Waza incited his village men to go to Jiksa and start cultivating there.

In other words, the intrusion turned into a collective action backed up by expressions of leadership and loyalty by people in Oudda who did not own Jiksa fields.

7.5 Assertion of rights: Box 3

As far as the Bana are concerned, the Jiksa region is theirs because it belongs to the territory of the Guili district. Thus, it is part of the same district as their own village of Oudda. At the same time it is theirs because their ancestors cleared the (empty) bush and started to develop the wilderness after they came down from the hilltops. Their own customary laws and the State laws declare that this is a basis for ownership rights. Unfortunately, both claims are denied by their adversaries.

7.5.1 About the boundaries

Apart from the question of who designated the area as a pasture reserve and whether it was allocated as such at all, the exact position of the boundaries of the area is also subject to discussion. The least contested are the eastern and western borders, although the Bana deny the status thereof as they deny the existence of the pasture as such (see below). Nevertheless, following the description by the Kapsiki and the Kila-Fulbe of the reserve status of their land, one can state that its eastern boundary is formed by the river Ndo, an almost year-round stream (although it reduces to a couple of separate pools at the end of the dry season) that runs in a more or less north-south direction at that location. The western boundary is formed by a hill ridge between the bush area and the territory of Haou, the southern-most village of Mogodé district along the main road that runs parallel to the border with Nigeria (see Figure 7.3).

The Fulbe and Kapsiki of Kila oppose each other with regard to the northern boundary of the pasture reserve and agree about the position of its southern boundary. However, as far as the Bana of Oudda are concerned, there is only one boundary, namely that between their village of Oudda and the territory of Kila. Referring to an intertribal war some 50 to 60 years ago between Oudda and Kila[99], that was ceremonially ended with the sacrifice of a dog on the traditional boundary between the two villages[100], they claim the boundary to be more than 500 m

[99] The older inhabitants who do remember this war cannot recall the exact date. The village chief of Kila, Takva Koye, now about 80 years old, participated in the fighting when he was young and when his father was still chief.

[100] The origin of the war lays in the animosities caused by the death of a Kapsiki man who had visited Oudda just days before his death, to carry a demon from the Oudda premises to Kila in order to use this figure against one of his fellow Kila. The Oudda people were blamed for this death and when some Kila-people, who were fishing in an Oudda river, saw some Oudda cultivators on their fields they attacked them with knifes and machetes, yelling and shouting as they did so. This noise they made attracted the attention of the other residents of Oudda and, before long, the two villages were engaged in a full-scale war that lasted a month. Some of the older inhabitants of today fought during that conflict and they know exactly which person was killed first, second, etc. After a month, they claim, the people from Kila grew tired and withdrew. Then the Oudda elders asked the Kila authorities for compensation for the dead and requested the ceremony involving the dog to confirm that the two peoples would never attack each other again and never again pass the mutual boundary.

to the north than the Fulbe and Kapsiki declare.

From several km north of Haou, the boundary between the two districts runs eastwards over the hilltop of the mountain Tsakatsla[101] (see Figure 7.3). Then, east of this mountain, on the western side of the Kubadje area, a small riverbed forms the boundary between Mogodé and Guili. The moment a rocky ridge emerges in east-west direction (*Photo 7.1, see the centre of the book*), the boundary follows this fall that gradually changes, first into a hilltop and, in the end, into a new, shallow riverbed which joins the southernmost of the two east-west flowing rivers between Kubadje and Kila almost at the point where the Fulbe settlement was built. From that point onwards, that is in an easterly direction, the boundary is formed by this river, which lies just north of the Kubadje settlement. Because of the collective ceremony in the past, the Bana pressurise the Kapsiki to deny this boundary position. They do not communicate with the inhabitants of the Fulbe settlement on this issue but focus on the party that should know.

In a gathering of Kila-Kapsiki and Oudda-Bana to discuss the position of the boundary and the memories of the ceremony (Kubadje, January 2001), the Kapsiki village chief, Takva Koye, came up with a neat statement to run with the hare: The fields in this region are the property of the Oudda people because their ancestors cleared them of bushes and trees, but the area itself belongs to the dominion of the Kila, and thus the Mogodé authorities. This does not satisfy the Bana[102] who explain the difference between the official and the traditional border by referring to the fact that after five peaceful Mogodé *lamibe*, problems about the boundaries started with the *lamido* before last, known as Hama Djouda. He wanted to enlarge his area and bribed the prefect of Mayo Tsanaga department. Although the prefect made an appointment with both *lamibe*, Loumbi of Guili and Hama Djouda of Mogodé, so that they could show him the original boundary in order to clarify its location once and for all, they organised it in such a way that Loumbi came too late and Hama Djouda had already given his opinion. The prefect accepted this without any changes and without giving Loumbi any opportunity to explain his stance. So it was Hama Djouda that moved the boundary to the hilltops and cheated both the prefect and the inhabitants of Oudda. The prefect must have received gifts (money or cattle) to agree with this proposal[103]. He made people erect iron signposts along this new boundary, the Kapsiki say, of which the stone foundations can still be found[104].

According to the Kapsiki (and some of the Fulbe of Kubadje) one of their chiefs, Djaoforo, illegally removed the signs in order to shift the boundary to the south with the purpose of helping himself and his friend, *lamido* Issa Tizze of Mogodé, to acquire a larger territory. Of course, this is sheer speculation on the issue of who removed the signs (if indeed they existed

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[101] The two current *lamibe* of Guili and Mogodé are always quarrelling about the position of the border in the neighbourhood of Haou along the main road, where the markets, settlements and travelling merchants make it worthwhile to have a couple of yards more territory. Here again the Bana of Guili position the border far more to the north than the Kapsiki of Mogodé. They underline their claim by referring to the language spoken in Haou, which is Bana and not Kapsiki. This, they state, also strengthens their claim to the boundary position in Kubadje-Jiksa.

[102] "Have you ever heard of that", they say, "people owning fields in the territory of another village?"

[103] Explanation of several Bana informants (men and women, aged from about 40 years and older), independent from each other, during the period December 2000-January 2001.

[104] This is what the Kapsiki and Fulbe claim. Kila village chief, Takva Koye, tried to find those pedestals, but this proved to be very difficult if not impossible.

at all). Kapsiki, who visit the Kubadje area, complain about this removing of signposts, because they can foresee more problems coming out of that[105].

To underline the value of the whole story the Bana have a collective explanation of *lamido* Hama Djouda's behaviour. He attempted to change officially the existing boundary, inspired by the fact that the Fulbe population were subject to the administration of his side of the boundary. In other words, the Kubadje inhabitants paid (and pay) their taxes to the chief of Mogodé. According to the Bana this is due to some impertinence on the part of the first Fulbe chief of Kubadje, *Elhadji* Djougé. After his arrival he started to give his tribute to the master of the territory, *lamido* Loumbi, but always was reluctant with his delivery. When, one day, Loumbi sent his noblemen to collect the delayed payment, a kind of quarrel broke out at the end of which Djougé swore never to pay anything to Loumbi anymore. He turned to Mogodé instead, where they were very glad to accept the money and the *status* of Kubadje to be part of Kila. Although Loumbi ordered Djougé and his kinsmen to leave his territory, when Djougé stayed the Guili *lamido* decided not to risk war over the matter[106]. In that period, the inhabitants of Oudda did not use their Jiksa fields, because they had left them fallow after 20 years of use[107].

This brings us to the second half of the ownership claim to the region by the Bana. According to them this area is never meant to be set aside for cattle grazing, and those who are said to have taken that decision do not have the right to do so.

7.5.2 Pasture or arable land? Rights of settlement, use and decision

The difference between the opinion of the Bana that 'Jiksa' is to be cultivated and the opinion of the Fulbe that 'Kubadje' is a pasture reserve (which refers to the same area), is the result of differences about who has the first rights to the region and which authorities have (and had) the legitimate right to make decisions on it (this touches on the above-mentioned boundaries dilemma).

With respect to 'first rights', people refer to primordial presence. With that they mean that those people whose ancestors first lived on (or used) the particular land, have the strongest rights. As explained in the history section of this Chapter, the Kapsiki won this 'race' for the Mandara Mountains in general, but the Bana were the first in the Oudda territory. While living on the hilltops they already started to clear the bush at the foot of the mountains. Three to four generations ago, they started to develop the surrounding plains with real fervour. Only after the French encouraged them to descend in the 1930s did they leave their mountain tops and started to build their dwellings on the plains. All informants in Oudda that now have claims in Jiksa (n = 32) state that their grandfathers or great-grandfathers started to develop that bush (clearing the trees and bushes, building small stone lines along the borders of their

[105] It is surprising that nobody has so far blamed the Oudda farmers for removing the signposts. When I asked the Oudda inhabitants themselves they stated that they had nothing to do with the matter. Along the main road crossing Haou, they say, a signpost demarcating the original location of the border had been removed by the Mogodé authorities (or inhabitants). The remnants are still visible.

[106] Remarkably, *Elhadji* Ngoura, the Fulbe neighbourhood chief of Kubadje, did mention several times that they never paid taxes to Guili canton, without the researcher posing any question on the matter. Perhaps he is aware of the accusations of the Bana towards his former chief, *Elhadji* Djougé.

[107] As stated, the departure from the Jiksa area may have been due to climatologic circumstances: the sandy soil there is very vulnerable to a lack of water. Up until the first new clearings were created in Jiksa in the 1980s it appears that the Oudda farmers had enough fertile fields surrounding their settlements.

fields and starting cultivation) somewhere between 100 and 120 years ago. This means they did so while they were still living on the hills. Like the respondents who do not have claims in the contested pasture (n = 91; 43 women), but in other parts of Oudda, they claim that the area was empty at that time: "There were no others there!"

In the Kubadje-Jiksa case, that is the historical dispute about the boundary and about the point at which the bush development started, it is not only important to establish who happened to be the first individual (family or clan) at the location in question, but also who happened to be the legal authority.

The Bana claim, referring to their vision of the boundary location, that it is their *lamido* (the one residing in Guili) who had and has legal authority over the Jiksa area. Indeed, in the past, this *lamido* Loumbi, together with his village chiefs, did change the classification of quite a large part of his territory from arable land into pasture reserve. He allocated four pasture reserves to four Fulbe chiefs. The surface area of each reserve depended on the number of cattle present at that moment in time. According to the present day Fulbe chief of Oudda, *lawan* Boubakary Néné, *lamido* Loumbi has given all four chiefs official papers to emphasise the 'gift'. Although one of these reserves is not situated within the territory of Oudda, the other three are: one in the north-west region of the Waza neighbourhood, one in the direction of Modélé and the last one directly east of the Fulbe neighbourhood Guiki (see Figure 7.3). This one, named after the current sub-neighbourhood and Fulbe *lawan*, is the biggest. None of the four coincided with the Jiksa (or Kubadje) area.

According to the Bana, the Fulbe argument about tax payment to the Mogodé *lamido* as a proof of belonging is a false claim, although the fact as such is true. It is based only on the impertinence described (above) of the first Fulbe chief of Kubadje-Jiksa, *Elhadji* Djougé. It was and ought to be the Guili *lamido* to whom the Kubadje settlers have to pay their taxes and who has authority over the Jiksa region.

The Bana also denounce the claim by the Fulbe that Kubadje-Jiksa was an empty bush area when they arrived. The fact that they could not see any fields, houses or people does not mean that it was undisturbed wilderness. In that period, the inhabitants of Oudda did not use their Kubadje/Jiksa fields because they had left them fallow after 20 years of use. Nevertheless, they were still their fields.

In order to stress the fact that the Mogodé authorities know perfectly well who the owners of the area are and who has a say in the matter, several Oudda inhabitants report having met the *lamido* of Mogodé or the Kila chief, Takva Koye, at the market in Guili. There these chiefs asked the Guili and Oudda authorities, like Hamadou Loumbi or Hamadou Ardou, to solve the issues once and for all, and to declare the Kubadje-Jiksa region a pasture reserve. They would not have posed such a request, the Bana say, if they had known that they had authority over the area. Yet, mentioning these encounters and using them to stress again the position of both *lamibe* can also be a conscious and purposeful effort by the Bana to strengthen their claim: one has to realise that such a request by the Mogodé authorities (if really posed) may just have been a strategic move to try and solve the problem mutually and not by sheer force.

In daily life, the differences of opinion about the boundaries and the classification of the bush land of Kubadje-Jiksa led to several attempts to invade the pastures and to clashes between different users.

7.6 Counter assertion and conflict: Box 3

The conflict situation, as depicted in Box 3 (see fig 7.2), only arises when two (or more) parties oppose each other. Both continue to stress their access, use or even ownership rights to the same piece of land. At the same time it is clear that mutual use is not possible.

When Bana start cultivating in the bush area of Jiksa/Kubadje, they claim it to be their right. "These are our fields". There would have been no problem if the other users had acknowledged this right straight away and had withdrawn. This did not occur, however. Part of the contested area is used as a settlement area on which houses have been built. The present Fulbe have cleared some 'home fields' around these compounds. They use the rest of the region for cattle grazing and as tracks to other grazing areas. After the description of the claims of the Bana in section 5, I will examine the situation and claims of the Fulbe of Kubadje in more detail.

7.6.1 Environmental domain

Physical basis

The rich pasture areas of the Mandara Mountains plateaux between Mokolo and Bourah are covered with more than 118 herbaceous species and 67 tree species, of which all grass species and 15 tree species are eaten by cattle[108]. In one of the official pasture reserves near Mogodé (Ploumtou) Mvondo Awono *et al* (2001: 272) consider the carrying capacity to be between 1.50 and 2.60 TLU/ha, dependant on the phytosociological group present[109]. Unfortunately many pastures are degraded (id: 267) and there is an abundance of 'Kubadje', the non-palatable *Isoberlinea doka*. Especially in the region just north of the Kubadje neighbourhood these bushes are everywhere. As stated, this explains the area's name.

Nevertheless, the pasture area itself has more diverse vegetation. The herders of Kubadje are proud of the quality of their pasture. They showed me the good herbs[110] and explained that Kubadje is the best pasture area in the far neighbourhood. Indeed, as described in section 2.1 of this chapter, the underlying soil is considered to be perfectly suitable for forest and pastures.

At the same time the Fulbe complain about the lack of herbs in the bush or a diminishing thereof due to a lack of rain (in 2000, 1999 was a good year) or water in general. They attribute this last fact to the activities of the Guili-people, such as tree-cutting and exposing the soil to the wind and sun. Because the grazing possibilities are limited, their herd numbers are not growing any more. In fact, the number of cattle is even diminishing, they say. For example Ngoura's herds shrunk from six to three in ten years. Two others complained about a decrease in the number of their cattle by two-thirds in five years[111].

During the rainy season, the Fulbe herd their cattle into the bush surrounding their settlement. As the dry season develops they withdraw more and more in the direction of the big bush area of Modélé to the east. Only some cows from small herds are kept behind to provide milk

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[108] Mvondo Awono *et al* (2001: 272).

[109] For example, *Paspalum scrobuculatum* groups are estimated to maybe carry 2.64 TLU/ha. NB. This is more than the carrying capacity estimated by Gaston (1996) or Breman (1975).

[110] Among others: *Eleusine indica, Dactyloctenium aegyptium* and *Brachiaria xantholeuca*.

[111] The decrease in cattle numbers is not only a direct result of diminishing pastures but also an indirect one, namely for the payments that have to be made for crop damage reimbursements and to 'buy' the support of the authorities cattle have to be sold.

for the children and because moving them is not worthwhile[112]. The herders also try to use the stubbles on the fields of the Kapsiki in Kila, but this is being met by more and more resistance because the Kapsiki want to use these harvest remains for their own cattle. In the second half of the dry season, the Fulbe are obliged to seek out the more abundant pastures of Nigeria. This is something they hate doing because of the security risks it entails for them and their herds. Some choose to go as far as Mayo Oulo more to the south, to be sure of water in the barrage lake there.

The younger men who have to grow maize for their small and extended families, reported a decline in agricultural production between last year and this year. They all complain of insufficient grain (maize) and that they have to buy grain to feed their families. It has to be added, however, that the Fulbe have always bought (at least some of) their grain in exchange for meat and milk. Most often they reported that this year's yield (2000) is half of last year's. The women's groundnut production is more or less constant over time. Only when new fields have just been taken into production (every two or three years) is the yield somewhat higher. In general, field fertility is good because the Fulbe ensure that their cattle, small ruminants and even donkeys leave their dung on the fields during the course of several months.

Population density

The Kubadje reserve, with its Fulbe inhabitants and vast stretches of bush land covers roughly 2 to 1 km[113]. It stretches along the Oudda border. Officially this area belongs to the Kila territory. In the 1950s, six young Fulbe family heads arrived with their wives and small children. In total they counted eighteen grown-ups and twenty-five children. Nowadays, the Fulbe hamlet consists of more than 300 inhabitants. The population density increased from 22.5 per km^2 to 150 people per km^2. However, for half of the year the men are on transhumance with the cattle and do not out any pressure on this area.

Table 7.6.1 Comparison of population density in 2000, in different areas

	Surface (km^2)	Inhabitants	People/km^2	Number of households
Oudda total	147	3863	26,3	651
Hlaka-Waza	56	833	14,9	139
Guiki (Fulbe)	10	210	21	42
Kubadje	2	300	150	17[a]

[a] = The household organisation in Kubadje is different from that of Oudda. Each household is made up of both the wives and unmarried children of a father, together with the married sons and their wives and children and sometimes even married grandsons with wives and children. Thus, a household can comprise 18 people (the number used here to calculate) or more, although small households exist as well.

The population density also increased over the years in the Kapsiki village of Kila. With the help of maps and oral information, the total surface of Kila can be estimated as being some 50 km^2. Like all Kapsiki settlements, the neighbourhoods and compounds are scattered over

[112] They estimate that some 50 cattle stay during the dry season when there is just enough fodder and water.

[113] The Kubadje area is smaller than the Jiksa area because Jiksa also covers an area south of the official Kila-Oudda border. The northern half of the Kubadje area was lost, a couple of years ago, to the Kila cultivators.

the hills. Because the numbers of inhabitants in the past, as described in the literature, were not defined per village, it is impossible to estimate the increase in population density in Kila village itself. Nevertheless, based on the total population increase of Mogodé sub-department[114], one can assume a population increase between 1945 and 1976 of more than 100 %. Although, according to Mohammaddou (1984: 147) and Boulet (1984: 139) the death rates of the Kapsiki are very high, their population increases quicker than that of the Bana because of their far higher birth rate[115]. Thus, in 2000, population numbers of the Kapsiki of Kila increased again and the soil surface area has to be shared by roughly double the number of people than when the Fulbe first settled in the remote neighbourhood of Kila.

So, the Fulbe in their pasture reserve are having to cope with increasing population pressure not only from their own numbers, but also from the surrounding villages and especially from the Kapsiki in their own village, Kila.

7.6.2 Human domain

Health

The Kubadje area is a very remote place. From the road that passes through Kila one has to turn right into the bush, pass at least two deep riverbeds (filled to the brim with foaming water during the rainy season) and several hill slopes with rocks and boulders. It is impossible to reach the settlement by car, even in the most accessible period. Even for the other Kila inhabitants, health care and services are a long way away, but for the Fulbe of Kubadje assistance is not available in acute cases. They have to look after themselves as if they were still bush nomads. However, because they are living in a somewhat degraded environment, they cannot dispose of all the necessary traditional (wild) medicines.

Drinking water is also a difficult issue. The nearest water well is on the way to Kila centre, at least an hour's walk away. People wash themselves and their cloths and pots in the pools of the river Ndo during the dry season, while the sandy banks serve as a filter to tap drinking water. Over the weeks the pools become dirty, soapy ponds that diminish in surface area until they disappear and temporary water holes have to be dug in the sandy riverbed. Finally the women have to undertake the walk to the Kila well every day in order to collect water. Until that moment, drinking water quality is very poor and illnesses are rampant as a result. Almost everybody suffers from amoeba-related complaints and several of the small children seem to be stunted as regards growth. In addition, the number of polio-like disabled people is high (more than 2 %)[116].

This latter problem is also due to the fact that mothers are not very motivated for the government organised vaccination programme. When asked, they express their willingness to offer their babies for immunisation, but the information about the exact day and hour of arrival of the vaccination team is not distributed properly (this in itself shows the inhabitants' lack of interest) and those who know have more important things to do than to arrive in time. Because

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[114] Beauvillain (1989: 590 and 598). He equalises Mogodé with 'Kapsiki'.

[115] This may be due to the very early age at which people marry in the Kapsiki culture (girls at 15 and boys at 18) in comparison to that of the Bana, where several 25 year old men explained that it was not yet time to be married. The same applies to girls aged 20 (interviews and observations during fieldwork, November 2000 – January 2003).

[116] One has to remember that the northern part of Nigeria, where the fundamental Islamic chiefs prohibit polio vaccination, is close by and that the WHO has warned about the cross-border transfer of polio.

of the remoteness of the neighbourhood, vaccinating nurses are not willing to wait for people who are late. Thus, in January 2001, only three of the 25 children under 5 years of age received their anti-polio drops[117].

Education

Up to now the western type of education has not appealed to the Fulbe of Kubadje. Their *lawan* Ngoura explains that when the French obliged parents to send some of their children to school, they hid their offspring and sent the children of their slaves instead. They feared that the colonisers might be tricking them and capturing or killing their children or, perhaps even worse, changing them into non-believers. The Fulbe children are sent to the so-called Koran school. That means that in the evening hours children gather around the hearth where, from a very early age, they learn to recite and write Koran texts. The older ones with a bit more knowledge help the others and they, in their turn, are educated by one of the adults with a full Islamic education. The Kubadje settlement has a high percentage of 'learned Muslims', both men and women.

These days, however, the value of the 'western' schools is recognised, especially by the younger parents. Ngoura also admits that the Fulbe missed the track: "Those *Kirdi* now occupy all the higher government jobs because we are not well trained." But, starting in education is difficult. The nearest primary school is, again, in Kila which is too far to walk for the little ones and inaccessible for the bigger children as well when the rains arrive because of the swollen rivers that have to be crossed. The younger parents are now trying to organise a class in Kubadje itself, although it is equally difficult for a teacher to reach the settlement [118].

7.6.3 Economic domain

The Fulbe do not cultivate for the market. The increasing amount of time they spend on agriculture is only for subsistence purposes. Their life revolves around cattle.

Like their ancestors, the Fulbe live from their cattle. Official numbers, based on vaccination, put the total number of cattle in Kubadje at 650 (Table 7.6.2). This means 2.2 cattle per person. If all the milk from the cows and all the meat from the 'normal off-take' is consumed[119], each person gets 429,400 kcal per year. This is less than half of what is needed for an adult (912,500 kcal). Based on interviews with family heads, it can be assumed that not all cattle are kept in the Kubadje surroundings. How many each family owns in other areas of Cameroon (or even Nigeria) cannot be established. However, economically (and thus also regarding the energetic basis of the families) the picture is somewhat brighter than is described here.

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[117] Own observation.

[118] Since January 2002 the acting chief Hassana (second son of Ngoura) has arranged for a Kapsiki school teacher to be present for half of the year (during the dry season), but in January 2004 the Fulbe women complained that the children had learned nothing because this teacher is not conversant with Fulbe habits: "After two years the children still do not speak a word of French".

[119] All calculations with regard to milk production per cow, calorific value of milk, consumable meat weight per cattle, calorific value of meat etc. are based on Dietz *et al* (2001) in relation to East African pastoralism. Although there is no reason to assume that West African data or data for the Mandara Mountains of Cameroon are exactly the same (soils and vegetation are different), Dietz's data are used because of a lack of other data.

Table 7.6.2 Number and density of livestock of Fulbe in 2000

	Vaccinated cattle	Number of owners of cattle	Mean cattle per owner (+ range)	Cattle per km^2	TLU (non-cattle)
Oudda Fulbe[a]	1047	11	95 (4 - 320)	42[c]	n.av.
Kubadje Fulbe[b]	650	17	38 (8 - 90)	325[d]	40

[a] = For Oudda, the data is based on the vaccination campaign of May 2000, as carried out by the local veterinary officer in Guili. It is very likely that at the time of vaccination the largest number of cattle were on their dry season trek to Nigeria and elsewhere.

[b] = For Kubadje the vaccination from which the numbers were taken, was performed in November 2000, a time at which the herds had not yet left the area. Apart from some calves the whole herd seemed to be made available for vaccination.

[c] = This number is calculated on the basis that the Fulbe of Oudda graze their cattle solely in the neighbouring Boubakary Nené reserve. In fact, density will be lower, because they also use other bush forest land in the vicinity.

[d] = This number is based on the assumption that the Kubadje Fulbe graze their cattle solely in their own reserve. In reality, this is not true because they not only use the harvest left-overs on Kila fields, but also use the more extended pasture area of Modélé.

Women and small children are entitled to milk, although a certain quantity of milk is used for the coffee and rice drink that is prepared for visitors. The women churn butter from the milk and sell it separately. For one litre of fresh milk they receive approximately 150 Fcfa. One litre of butter fetches 3,000 Fcfa at the Kila market. Yet, they do not earn much because the herds are small, most of the cows are away during three to four months[120] and, as they say, the production per cow is low. During the dry season the sale of milk stops: during those harsh times the cows produce even less and most of them are away with the rest of the herd anyway.

Some younger men left the area in their youth to try their luck elsewhere, as a trader or a car driver, but when their fathers thought it time they returned to get married. Now they feel trapped. Having been summoned home to become real cattle keepers, they find out that the bush is declining and that cattle numbers are declining with it. They complain that, with so many fields around, they cannot even graze the cattle at night, so these lose weight and do not produce the number of calves they should do. Comparing the two Fulbe groups of Kila and Oudda (see table 7.6.2), it is obvious that the Fulbe of Kubadje possess fewer cattle per person than those of Oudda (a mean of 38 versus 95 per owner). The Kubadje Fulbe fear for their future as cattle keepers.

One of the economically based wishes they have is a road into their neighbourhood to make it easier for visitors to reach the area but also to increase the level of access to and from markets. They do not worry about whether or not this would disturb the pasture as such.

[120] Theoretically, 528 litre of milk is available per person per year. If the milk is divided between women and children, each gets 660 litres. But, because of a lower than average production and three months of almost no milk at all (from the few cows that are left at home to produce milk for the younger children), a woman or child has access to less than 437 litres in the most ideal situation (market value: approximately 92,000 Fcfa).

7.6.4 Social domain

Family and friends

The Fulbe are an ethnic group dispersed over Cameroon and West Africa in total[121]. They feel they belong to one big group but, at the same time, they are very attached to their own clan and (extended) family. Elderly men in particular travel a lot to visit their relatives. In cases of celebration (the graduation of young people from the Koran school, babies' name-giving ceremonies) or death, visitors arrive from far and near. For Kubadje this 'far' may mean from their region of origin near Garoua in the south, or from Nigeria in the west where the Kubadje Fulbe spent part of their lives. People may even come from further away: married daughters who live with their husbands in Ngaoundéré or even Douala take the trouble to attend such events. 'Near' means from Kila (conversed Kapsiki) or Modélé, the first Fulbe settlement in the region approximately fifty years ago, where the Kubadje Fulbe also spent some years, or other villages and towns in the vicinity such as Guili or Mogodé. In short, they have relatives and friends everywhere.

The acting chief, Hassana, and several of the neighbourhood elders, spend quite a lot of time visiting their kinsmen in Modélé'. They want to have a perfect relationship with them because they have authority over the bigger bush-pasture area there. Safeguarding access to this pasture is important. These fellow Fulbe are also important in the regional struggle for the definitive recognition by authorities of certain pasture reserves, of which Kubadje is one.

In the settlement itself there are two different sub-groups which are bonded separately. On the one hand, there is the large compound of Ngoura and, on the other, the rest of the compounds five minutes' walk away. The inhabitants even give this second concentration a different name (that of the founder), but this is contradicted by Ngoura, every time he hears somebody using it. This separation may have some meaning in daily life, but to the outward world Kubadje is one entity.

Political domain

Officially Kubadje is part of Kila and, thus, is subjected to the Kila village chief and the *lamido* of Mogodé. Although the Fulbe recognise the position of Takve, the Kila chief, when they visit the Kila market or when minor quarrels break out between Kapsiki and Fulbe, they manage their settlement by themselves. For bigger problems they turn to the *lamido* in Mogodé. It is to him that they pay their taxes which are collected by their own neighbourhood chief. According to them it is not official politics that are important for ensuring that the area (and their lives) is/are managed properly. Keeping the *lamido* on your side is the main point.

The Fulbe *lawan*[122] Ngoura himself is out of the settlement for at least half of the year. During that period he does not herd his cattle – that is the task of his sons - but instead invests in contacts with all the different authorities, as well as other Fulbe from whom he also collects information. He has a house in the departmental capital Mokolo, where he spends some time, close to the official authorities, but also close to the religious and Fulbe authorities[123]. He

[121] See, e.g. De Bruijn and Van Dijk (1995).

[122] According to his position in the village he is a *djaoro* (a neighbourhood chief), but both the Fulbe and the Kapsiki, and even the higher authorities call him '*lawan*'.

[123] It was in this house in Mokolo, after several months of illness and having been looked after by his third daughter (a grown-up woman) that *Elhadji* Ngoura died in the early days of January 2003.

leaves the leadership of Kubadje to his second son. The first son is not as intelligent and politically capable, so Ngoura appointed this second son to watch over matters and the decision was approved unanimously by the rest of the settlement. Contacts closer to home, such as those with the *lawan* of Modélé, are maintained by this son. Together with the Modélé-Fulbe, the Fulbe of Kubadje try to manoeuvre in such a way that the big pasture of Modélé is secured or even extended[124].

Although the Kubadje-Fulbe seem to be far removed from State politics, indirectly they are involved in them via their extended networks. For example, because they have uncles and *marabouts*[125] that are members of the ruling party, they have to back up that party too. This network also gives them some (small) say in matters. In the past, the so-called Fulbe party UNDP was an option to voice ideas and needs, but it lost power over time.

In short, although the Fulbe seem to be living in a very remote place, they keep in touch with all kinds of issues that are going on in the Far North of Cameroon which are of importance to their community.

Conflict mediation

Normally, internal conflicts in Fulbe society, such as disparities between spouses, quarrels between youngsters, discussions over access to waterholes or animal damage etc., are solved by the local chief (or herd master) and his wise men. If these cannot restore peace, the case is brought before the *lamido*. In the case of external conflicts, that is conflicts between groups (again over access to water or rights of trespassing), the groups' *lawans* had to solve the dispute or visit the *lamido* together to ask for his objective intervention. In the past, the *lamido's* subjects had to pay a symbolic amount of money for this arbitration (with every subject already having given something as an expression of their esteem the moment they entered the region with their cattle, just to make sure the *lamido* would defend their rights and do his utmost to safeguard the general security of the area (see Moritz *et al* 2002)). Nowadays it is less clear. Most of the time, people complain that they have to pay the *lamido* more and more, and the word 'corruption' is heard time and again. On special occasions the *lamido* works together with the official police and the sub-prefect, but the Fulbe prefer to keep discords between their subjects to themselves.

Land rights

Within the Kubadje area the neighbourhood *lawan* Ngoura[126] decides about the use of land. He always consults the other elderly inhabitants, but the final decision is his. In this way, he can loan out land to agriculturalists if he thinks it wise to give up a small part of the pasture to engender loyalty to his group. He can forbid cultivation by the Fulbe on certain land surrounding the settlement because he is the one that has to implement the *lamido*'s allocation of Kubadje as a pasture area.

This shows that he is subordinate to more senior chiefs. Officially the village chief of Kila is higher in line, but land allocation in the Kubadje area is not his responsibility. As explained

[124] Indeed, in 2002-2003, while awaiting a solution for the Kubadje zone, MIDIMA extended the Hina-Modélé reserve to the eastern Oudda pasture reserve of Boubakary Néné.

[125] Religious leaders.

[126] After his death his second son Hassana became the *lawan*. He already had considerable legitimacy before his father's death.

above, the traditional chief of the region, the *lamido* of Mogodé, is the person to whom Ngoura refers with regard to issues concerning the outer boundaries of the pasture reserve, or when the intrusion of farmers disturbs the peace of the cattle and their owners. In such instances the *lamido* and (or) his noblemen come down to look at the situation and take their decision.

Cultural domain

Although a grown-up Fulbe is expected not to give free reign to his emotions[127], before they reach that stage a lot of quarrelling will have gone on and will have even been encouraged. The Fulbe of Kubadje raise their children to believe that they should not let anybody violate their rights. Parents and other adults encourage their little ones to stand up for their interests, even when these are only perceived interests. In order to achieve their goal, they are allowed to use verbal and even physical aggression. As a result, adolescents often become involved in real fights, some involving the use of knives. People have been seriously injured on two occasions in the past two years[128].

In the case of these and other quarrels the Fulbe regard themselves as totally autonomous. They do not want to involve the police or other authorities, but settle disputes between the parents of the children (or even grown-ups) involved on the basis of the arbiter role of the *lawan* or other elders. An external but related *mallum*[129] is only contacted occasionally in such situations.

Fulbe women have a full right to Koranic education. According to Islam they have the right to inherit (mostly they add inherited cattle to their brothers' herds) and they are not required to perform heavy agricultural tasks. In Kubadje the women are mainly engaged in household tasks such as cooking, washing and looking after the children. They do, however, cultivate small plots with groundnuts and some vegetables around the house - all for household consumption. Officially they are subordinate to their men, who decide about everything concerning the family. The women are not (or pretend not to be) involved in men's problems such as the diminishing of pasture surface and possible decisions about leaving or engaging in conflicts. They do, of course, discuss those matters among themselves (and, I am sure, with their husbands in the privacy of their huts). When talking more confidentially with one of them as an interpreter[130], several women expressed their concern: "What is going to happen? We cannot move to another place with all these people. Where can we go to? Where can we build new houses?" They wanted the authorities (and me) to take measures to stop agriculturalists invading the area.

In short, the Fulbe of Kubadje do not have many other options than to herd their cattle and earn their living from cattle and milk. Although they want to be autonomous, they understand the importance of having 'outer' authorities on their side to secure their grazing area. Therefore, they try to persuade others to realise the necessity of a pasture reserve and to keep the cattle tracks open from this small reserve to the larger ones nearby.

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[127] See Van Santen (1993), De Bruijn and Van Dijk (1995), Vereecke (1999), Breedveld (1999) or Mortiz (2003) about the concept of "*Pullaako*" that is indispensable to the Fulbe identity.

[128] On one occasion someone lost a number of fingers and once someone was stabbed in the stomach and was rushed to Guili hospital. On both occasions a son of *lawan* Ngoura was involved.

[129] The Fulbe word for a *marabout*, a Koran teacher.

[130] Most of the time a Kapsiki interpreter was used in the Kubadje settlement, because none of the Fulbe there could speak French (see Chapter Methodology), but if a Fulbe visitor was able to translate, especially if the visitor was female, I took the opportunity to involve her in my work.

7.6.5 Discords and claims

The northern limit of the Kubadje reserve is demarcated along the northernmost of the two east-west running rivers, just between the rest of Kila and Kubadje. The border was defined in recent times[131] when the sub-prefect and the *lamido* of Mogodé entered this southernmost region of their territory, together with the sub-department's line officers of the forest department and of the agriculture department. They came to intervene in a quarrel between the Fulbe inhabitants and Kila inhabitants of the region. According to the story, the former village chief, Koye, had already stipulated the location of this boundary to his citizens, but he obviously needed some back-up from higher authorities. The district authorities not only defined the boundaries but also declared to their subjects that it was prohibited to cultivate in the reserve and that possible crop damage caused by cattle within the reserve area would not be eligible for reimbursement.

The northern boundary is still discussed over and over again. It seems as if it has to be redefined every couple of years and the sub-department and district authorities (sub-prefect, line-officers and *lamido*) have to intervene regularly. A couple of years ago, for example, Zra Pierre, the nearby neighbourhood chief on the western side, asked the district chief of Mogodé to come and shift this boundary into the reserve slightly more, so as to make it possible for the inhabitants of his neighbourhood, Djalingol, to use some of the fields that had, until then, been situated within the boundaries of the reserve. Indeed, nowadays, the western part of the northern boundary of the reserve follows the hilltop and not the river as used to be the case. As a result, the Kila farmers are allowed to cultivate in the 're-established' fields there and, in the event of livestock-induced damage, can claim reimbursements from the animal's owner.

The discord between the Fulbe of Kubadje and the cultivators of Oudda over the southern border is more severe. As outlined in section 5, the Bana claim that this border has to be situated more to the north. The Fulbe refer with fervour to the official maps, because these are supposed to be in their favour. Formally, the southern border between Kubadje and Oudda, which is therefore located between the two districts, is stretched along a line running over the top of the east-west mountain ridge just south of the Fulbe village quarter. This latter border is confirmed by the Kapsiki of Kila, especially by their village chief, Takva Koye, who claims to have been present when the borders were established in his youth. Although the metal border poles have gone, both the Kapsiki and the Fulbe say that the mountain tops themselves cannot be removed and are proof in themselves.

As explained above, the Fulbe say that the *lamido* of Mogodé is their 'boss'. They pay taxes to him and turn to him in cases of internal conflict. The official boundary delineated by the (since removed) boundary marks shows that the territory belongs to the northern district. According to an official government report written by the 'C*hef de Poste Forestier et de Chasse de Mogodé'* (2000), it was Takva Koye, the village chief of Kila, who in response to a demand made in 1958 by *Elhadji* Ngoura and his fellow Fulbe for a permanent pasture zone, started to delineate such a zone together with the accompanying small tracks for animals. This

[131] An exact year is not given, but it could be 1981 (when the case between the chief of Guili, Loumbi, and his counter-part of Mogodé, Hama Djouda, escalated and was put before the committee in Mokolo, that decided to deny access to all farmers), or it may have been later, when *Elhadji* Issa Tize had already taken over the chiefdom in Mogodé (upon the death of Hama Djouda, 1984), and the authorities had to visit the area for a second time (*Chef de Poste Forestier et de Chasse de Mogodé* (2000: 9-10)).

suggests that the area indeed belonged to Kila and, therefore, the northern authorities. However, this report is written by a line officer of Mogodé with interests and loyalties on the northern side of the boundary. Moreover, it reflects a demand by Ngoura at the time that he was indeed already paying his taxes to Mogodé.

7.7 Violence: Box 4

The last box of the VoE diagram: Box 4, Violence (see Fig. 7.1), will only be reached when (one of) the parties choose(s) to use violent means. Otherwise the result will be the 'non-box 4' route.

7.7.1 The use of force

Contending: the use of threats

Contending means trying to get your own wishes implemented without any regard for the wishes and needs of others. As far as the Bana are concerned this means that they want to chase the Fulbe out of the Jiksa area, without being bothered by how these cattle keepers can earn their living or where they have to live. As far as the Fulbe are concerned contending would mean that the Bana stop cultivating in the Kubadje zone and that they leave open corridors to, for example, the Modélé bush. In theory both can be reached by persuasion, threats or straightforward violence: beating or shooting the other into submission.

The route to violence starts with threats (see also chapter 5 and 6). Mostly the expression of threats in the Kubadje–Jiksa area is triggered by crop damage caused by cattle. The threats can be expressed by either the cattle owner or the cultivator or both. For example, a cultivator tries, using reasonable arguments, to get the cattle owner to acknowledge his fault and to pay back the crop losses. As a result, the Fulbe starts to threaten his adversary in the hope that he will leave. In other cases the cultivator starts to verbally abuse and threaten (with the same hope) the cattle owner who has not looked after his herd properly.

Just encounters between agriculturalists and cattle keepers in the Kubadje-Jiksa bush can trigger an exchange of verbal abuse, especially when young Fulbe are involved (the elder Fulbe keep quiet, or patiently try to explain their stance). Sometimes such verbal abuse does not go any further than 'calling people names', but mostly it is mingled with threats. If the Fulbe see a Bana busily clearing a new part of the bush in their area they will feel obliged to warn the cultivator that his actions are illegal and that they will call on the police to arrest him. The Bana then responds with even more menacing counter threats: "It is you who should not be here. You are living on our soil and we will chase you away. We are in the majority!"

Contending: the use of violence

Several times the threats turn into actions. A woman who had the nerve to follow the cattle tracks from her ruined field to the Fulbe settlement and complained to one of the young Fulbe men present, was touched on her lips by him with a stick with the accompanying text that she should be quiet, "otherwise…." The other party also put up a good show: some years ago the refusal to pay for cattle damage had annoyed the Bana terribly. At that time a group of them captured the Fulbe *lawan* Ngoura, took his clothes (and even his shoes) and, while setting him free, warned him to change his behaviour and leave the area otherwise something worse would happen to him or one of his subjects.

Full blown violence has not (yet) occurred. The Fulbe indeed realise that they are in a minority facing a large population from a whole village. Although some of the Kapsiki from Kila have expressed their willingness to help 'their' Fulbe, it takes too much time to reach Kubadje should the Bana launch an attack. On top of that, most Kapsiki are not even aware of a Fulbe settlement in their neighbourhood and some who are aware live close by and would be very happy if these Fulbe were to leave. It would provide them with a larger field surface area. Nevertheless, there are Kapsiki who do talk about war when Bana aggression is mentioned: "If those Bana start attacking 'our' Fulbe, I will pick up my gun (or spear) and help the Fulbe". A small band of young men (Fulbe and Kapsiki) has already devised strategies as to how to attack the Bana and make them stop their cultivation activities in Kubadje.

Almost all Bana with fields in Jiksa, even those who do not use the fields themselves, have expressed their willingness to help fellow villagers should they be attacked by the Fulbe. They are resigned to living with that possibility. Women are given fields surrounded by others so as not to be the first attacked. Several men from Waza and Hlaka are on the alert for calls from cultivators in the north. Of those who do not have fields in the contested area, 15 % have expressed their general loyalty in words or state that they are prepared to fight when necessary. Some of them are even involved in the drawing up of plans for a first attack. They are not (yet) organising their troops, but every time they come together (for example at the weekly market or underneath the village tree at the end of the day) they discuss possibilities and exchange the latest news about damage and threats from the other side.

In general, the State is perceived as an entity which is not involved very much, but which will be there to suppress violence should it erupt. Inhabitants of both Kubadje and Oudda have respect for the police, but they express their doubts as to whether this police will reach the remote pasture reserve in time should fighting start. The lower level authorities are certainly involved. These *lamibe* seem to be the triggering factors in the conflict. Riding on the waves of the conflicting interests of their subjects, they try to make those subjects fight their own fight, instead of helping find a solution. Their traditional role was one of conflict mediation but now they seem only to incite their subjects to aggression.

In short, the Bana with Jiksa fields seem to embody enough reasons for people to fight for their rights. Their cost-benefit calculations may turn out to result in the use of violence. As far as the Fulbe are concerned the situation is more problematic, but they also have more at stake. The younger (and thus more numerous) ones may tend to choose violence as their only option.

7.7.2 Escapes: can violence be avoided?

There are two types of action that can lead to the avoidance of violence. The first involves one of both parties giving in. This may be the result of pressure from the other party or higher authorities or it may be due to the autonomous decision of one of the parties. The second is the finding of a solution that serves both parties.

Contending: the use of persuasion

Theoretically it is possible to call the use of threats a method of persuading an adversary. Because it is the most violent method of persuasion, it is described in a section above under the heading 'use of force'. Here we are focusing on the non-violent way of persuasion, namely the use of arguments by which one of the parties puts pressure on the other party without

(we are still talking about contending) listening to counter arguments or trying to understand what needs and interests the other party has.

However, because the two groups involved here are not really on speaking terms, normal, friendly persuasion is out of the question. Even persuasion of higher authorities, to make sure those authorities back them in case of escalation of the conflict, is not one of the strategies used by either Bana or Fulbe. Both parties leave that part of the contest to their *lamido* because he is the strongest ally in that respect. He has access to other authorities and knows the routes. He also wants the area to be his. As explained the Kubadje chief, Ngoura, does invest in linkage building with his *lamido.* However, at the same time, he does not seem to do his utmost to maintain a healthy relationship with this *lamido*. He does not collect the taxes on time, does not respond to all the summons for meetings and, according to a complaint by the *lamido* himself, does not react to the plans and demands of this *lamido* for more development efforts (such as in education and health issues).

Yielding

The story told so far in this chapter would suggest that withdrawal of one of the parties is a past stage when the position of rights claiming is reached. Both agriculturalists and cattle keepers firmly state that they want to stay and they have the right to stay. Nevertheless, these firm statements really mask other views. Some of the Bana women refuse to cultivate in the Jiksa region because "You cannot be there day and night, so you can't protect your fields from crop damage. The cattle owners from the settlement there will never pay for any damage. Why should you waste your time and energy with the risk of achieving no yield at all?" They have cultivated in the contested area - or their husband or friends have done that - and they continue to claim that the Fulbe have settled on their land, but they do not see any possibilities to make this claim come true. They do not believe the authorities will help in this matter. Local authorities do not have enough power themselves (like the *lamido* of Guili) or they do not want to exercise their power out of fear, or because of corruption. Higher level authorities are just not interested. Everybody acknowledges that the prefect is indeed needed but he is far away.

On the other hand, some of the cattle owners also reflect on their chances to win their case. "Farmers just go on clearing the bush. Even if authorities state that reimbursement in the event of crop damage by our cattle is not going to be paid for, where can we herd our cattle when everything has been turned into fields?" They start considering a move, quietly looking for other places to live. "Perhaps, with some luck, we can find a new place, although there are nowhere such good pastures as here."

This shows that, although 'yielding' is often regarded as giving in to other parties' wishes, it is of course also a strategy which focuses on one's own interests. Taking account of reality, and therefore, of other parties' wishes means the costs of imposing one's own wishes may seem to become too high. A cost-benefit analysis results in giving in.

Problem solving

If the two parties were to find a way to divide the area between them, to make sure the cattle can be fed, the cultivators can produce and the Fulbe can live in their compounds, then the problem would be solved. Indeed, many Bana have proposed a solution. This extends the contested area as such, but not their own territory. "Why shouldn't we rotate the pasture areas?"

they ask, "In the past this was common practice"[132]. Because the fertility of the fields in the direct vicinity of the Oudda neighbourhoods has diminished, they are willing to delineate these as a cattle reserve, to be given in use to the cattle keepers. The fertility in Jiksa is so good that a rotation back to their former fields, now offered as pasture, is regarded as only being necessary in more than 25 years time. During the interim period, trees may grow substantially and the fodder production of the new pasture will increase tremendously.

The Fulbe are not totally against the plan but they hesitate because they do not trust the other party or the authorities. "If we give up an official pasture reserve", they say, "How can we be certain about the new area. It should be made official as well."

Another major objection to the rotation of pastures is the fact that the Fulbe would have to build new compounds every time. They have now invested in well-constructed houses and furniture. It would be a major effort to move these belongings. Moreover, building new huts takes time, effort and even money due to a lack of expertise.

The biggest hurdle to get over is the disagreement between the *lamibe* in the two districts. Each of them is sticking to his idea about the border and, more precisely, the *lamido* of Mogodé would never accept the loss of part of his territory without higher level interference (and perhaps even not then either). For the moment no State organisation (for example MIDIMA) or NGO has taken on the task of settling disputes between the two parties as a cautious start on the way to reaching a consensus or compromise.

Even the presence of "our own Fulbe" in Oudda[133] is not (yet) used in a kind of mediator role to bring the Bana cultivators and the Fulbe of Kubadje together. They can feel (and have experienced) the problems of the cattle keepers, they have the same culture but, at the same time, they feel like inhabitants of Oudda and are loyal to their fellow villagers more than to the Kila inhabitants.[134]

The position of the border between Kila and Oudda is taken up as an issue by the inhabitants of Oudda themselves. However, they did not discuss it with the Fulbe that live in the area. They only overruled opinions of the Kila-Kapsiki and imposed their vision of the past, after which they decided that, from now on, they would not let anybody stop them from using 'their' land. If higher authorities accept this border shift, this 'matter-of-fact' approach may serve as the starting point for mutual problem solving.

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[132] The older men, and especially some of the representatives of the *lawan* of Oudda I (the conglomerate of the Oudda-quarters at the Guili side of the bend in the road), refer to this custom.

[133] Many Bana refer to the Fulbe who live in the Oudda neighbourhood Guiki as "ours", in contrast with the Fulbe of Kubadje, who have chosen (as the Bana say) to be "theirs", that is "from Kila".

[134] At the end of 2002 the area of the pasture reserve Boubakary Néné was officially extended by the State (MIDIMA), because the Kubadje area, that they wanted to delineate officially in their quest of more forest-pasture areas in the Mandara Mountains, aroused excessively complicated controversies. Agriculturalists who own fields which were originally around the Boubakary Néné reserve but are now within the boundaries, are angry. They not only express their wrath to the authorities, but also accuse their "own" Fulbe. Relationships between the two groups within Oudda have deteriorated because of the MIDIMA action.

8

Conclusions: Is there a pattern of scarcity to violence?

Bana, Kapsiki, Tupuri, Fulbe - everybody struggles with a growing competition for land. But does it lead to violence? Does a causal link exist between environmental scarcity and violence? If the answer is "yes", what is the causal chain of events and how do people avoid the outbreak of violence in the event of environmental scarcity? This chapter draws a conclusion with regard to the research questions. At first sight all three cases seemed to consist of some (minor) violence related to natural resources. People fought, wounded each other, threatened each other gravely, damaged each other's belongings, used witchcraft against each other and even took a hostage once (albeit temporarily). Whether the cause was indeed environmental scarcity has yet to be concluded.

To explain causes, it is best to start from the event "that we want to explain and then to work backward in time and outward in space so as to enable us to construct chains of causes and effects leading to those events…" (Vayda and Walters 1999: 169). To answer the research questions the violent outbreaks (small as they are) are the events to be explained. Thus, the analysis will start at the last box of the Violence-or-Escape-diagram (Box 4: "Violence", Figure 8.1) and work its way 'upwards' along the causal chain.

It has to be said, that this last box of the VoE diagram and, thus, the last sub-section of each case description (chapters 5, 6, and 7) is not the last step taken in real life. After the use of small-scale violence - the type of violence noticed in the case studies - a situation can escalate to become large-scale violence. But it is also possible that the *status quo* of minor violent outbreaks will continue. Even the disappearance of the use of violence is possible[1], when people see that their strategy of aggression and force has resulted in what they wanted, or when they perceive that violence does not get them any nearer to their goal while, on the contrary, their non-violent group co-members have more success. Each violent event, after all, was accompanied by non-violent actions by other actors.

In this chapter I will subsequently discuss the 'event boxes' of the VoE diagram with their

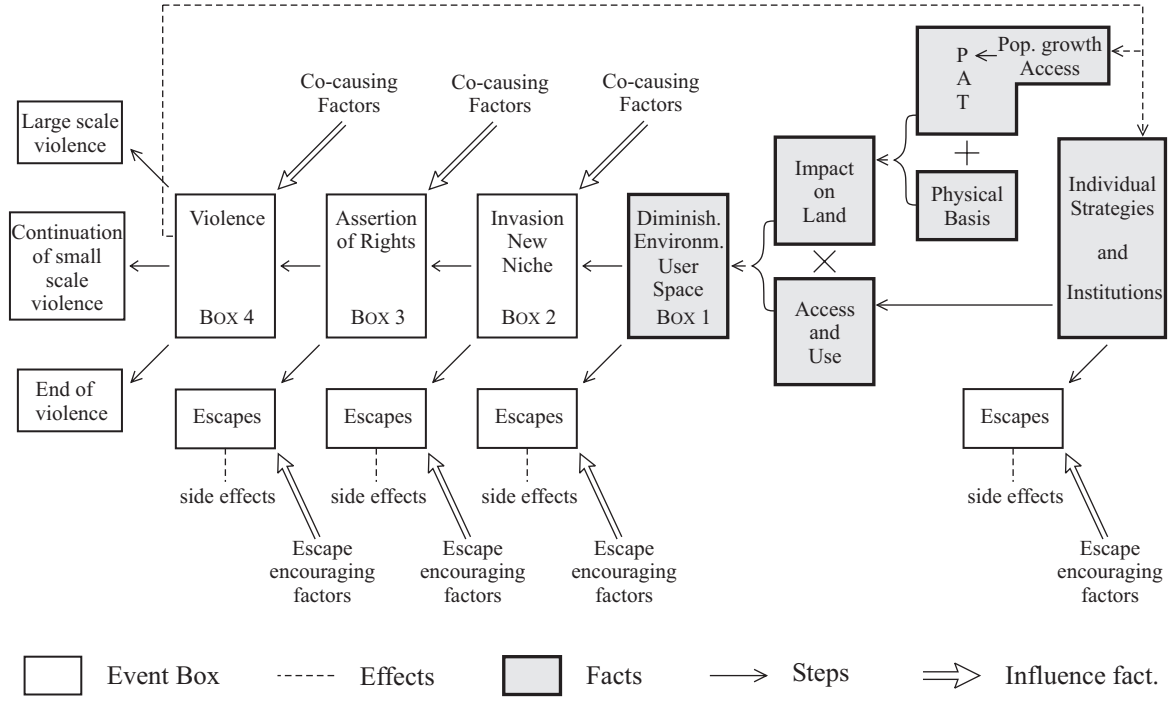
[1] And, indeed, always will be reached, whether or not after long periods of aggression and suffering.

possible causes. As has been stated, the exercise will start at Box 4. For each case I will briefly say something about future possibilities of outbreaks of violence. In the second section I go more or less backwards in time and discuss Box 3 of the VoE diagram, the assertion of rights, its causes and escapes. In each section this pattern of backward movement is continued until the left side of the original diagram (see chapter 2) is reached. For reasons of clarity, each section will start with the enumeration of the 'same' four 'questions', although adjusted each time to the section's subject, namely that of the VoE Box in question.

The first of these 'four questions' is not really a question, but concerns the description of the event Box involved. Then the questions about the causes to follow the cascade to violence towards this special Box and about the reason why not everybody has followed the non-Cascade get attention. These first three 'questions' focus on the separate cases and therefore describe automatically the differences between the cases. The fourth questions, then, regards the similarities between the cases, because the whole goal of the study was to find enough similarities to make it possible to speak of a pattern. With that same aim I make short side explanations and considerations when it is deemed necessary.

I end the chapter with a section on general conclusions regarding 1) whether or not a pattern is found between scarcity and the outbreak of violence and, vice versa, the outbreak of violence and the existence of scarcity; 2) critics on the theory of Homer-Dixon as one of the most important ES-theories; and 3) the usefulness of the VoE diagram in this type of research.

Figure 8.1 *Reverse VoE diagram*



8.1 Why violence?

1 Description of the violent event
2 Is it caused by assertion of rights or is it caused by other factors?

3 Why do not all actors use the escape route of non-violence?
4 What are the similarities between the three cases?

This section ends with a short theorisation that generalises the findings, with a view to improved use of the VoE diagram (section 8.1.5).

8.1.1 Description of events

Case 1: Baba Deli

In Dzambou the event consisted of the fist-fight at the Baba Deli meeting in which the authorities indicated the trees to be marked as boundary signs for the official pasture-forest reserve. It was a fight between two groups of Kapsiki agriculturalists. One of the groups consisted of farmers that were against the establishment of a pasture-forest reserve and especially against the boundaries shown at the meeting. The other group consisted of farmers plus two or three cattle keepers (who also cultivate) who approved both the establishment of the reserve as well as the position of the boundaries. The representatives of the first group had already given their formal approval of the reserve in a kind of participatory meeting with the authorities, but the exact location of the boundaries was then decided differently[2]. The changed position of the boundaries favoured the approving group by permitting them to stay housed where they were, while the other boundaries would have obliged them to move. These previously decided boundaries would have followed the location of boundaries as the village inhabitants perceive them as having been drawn in the past in an agreement with a former cattle keeper of Fulbe origin. Those farmers that were against the pasture-forest reserve take the view that such an agreement had a temporary status: the fertility of agricultural fields surrounding the pasture area would determine whether the grazing status would end or not. The fight was started by people from this latter group. Apart from bruises, no wounds or casualties were reported.

It is possible that, in Dzambou, some of those who refrained from violence at the meeting will resort to it in the future, as deliberations of some groups of younger men have shown. They are firmly dedicated to reaching their goal and are discussing several strategies of varying violent natures. Most of those who are considering the use of violence in the future have already used it in the fist fight at the Baba Deli meeting. Obviously, this fight and the absence of any sanctions motivate them more to use violence, although the success of the fight has been nil up to now.[3]

Case 2: Kolara-Kobo

In the whole Diamaré several violent events have been reported, but no outright violence has been recorded in the exact area under study. Nevertheless, the outspoken threats can be considered as (the beginning of) violence and can certainly be placed in Box 4. Thus, the (series of) serious threats uttered directly against the threatened adversary can be considered as the event that has to be discussed here. These threats are aimed at co-users and are, more often than not, directly related to the new clearance of fields, especially on the camps of cattle keepers or, on the other hand, to cattle damage to crops. In particular, verbal threats that are

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[2] Most probably the farmers' representatives did not have any choice but to agree with the governmental plans.

[3] The learning effect, mentioned by Sandole (1993) in his list of reasons for violence (see Chapter 2), is somewhat ambiguous here.

underpinned by threatening gestures, such as the waving of fists or arms, may lead to physical confrontations.[4]

In the Kolara-Kobo bush, the violent part of the conflict is something solely between the users in the field (agriculturalists and cattle keepers). The outbreak of violence between cultivators and herders in an adjacent part of the bush, reported by Van der Ploeg (2001)[5], is even hidden from the authorities[6]. Moreover, serious threats to use real violence are not aimed at convincing the authorities to appoint the area to the threatener. The aim is to chase or frighten the other user away.

Violent outbreaks in the broader Diamaré consist, just as often, of encounters between herders as well as between herders and farmers. In the (smaller) area of the study, however, threats by herders against other herders only occur sporadically. For example, some herders consider the bush to be too crowded with cattle and try to prohibit other herds from coming too close. In general, though, up till now cattle keepers have voiced the feeling that it is shameful to chase co-herders (even those of another ethnic origin) away. You should be tolerant about others using your campsite and you should be patient when others jump the queue at watering points.

As has been mentioned earlier, in the study area as such most encounters occur between herders and farmers. At the same time, the violence does not go beyond verbal threats, albeit very outspoken and serious ones. This type of threats is regarded as minor violence. However, all threats can be signs of future violence. Although a threat is something different from plans about how to arrange an attack or an attack itself, the one can quickly develop into the other. Minor threats raise the general level of tension towards the violence threshold.

Case 3: Kubadje-Jiksa

In the Oudda-Kila case, some users of fields or pasture in Kubadje-Jiksa resorted to violence on a seemingly ad hoc basis. The event to be clarified is a series of such encounters. These events include an attack by the cultivators on a sole and thus vulnerable herder who was near their fields. He was attacked simply because he was there. On another occasion the people reacted to crop damage by cattle by punching someone on the nose. They used the violence to frighten their adversaries away, not to convince the authorities of their rights. The herders, in turn waved their herding stick threateningly in the air or used it to hit a farmer on the head when they discovered him clearing part of the bush. As soon as the farmer called for assistance from his fellow cultivators nearby, the herders retreated. The herders' threats have not (as yet) resulted in the retreat of farmers that had already entered the area to cultivate. It did, however, make certain farmers (especially the older ones and some women) choose not to start activities in the area at all.

Future larger scale violence may be expected because of agitated young farmers who have

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4 Some of the threats are not voiced to adverse users of the bush, but to researchers or other visitors. These threats can be regarded as belonging to Box 3 of the VOE diagram (see section 2).

5 See also Moritz (in press).

6 The direct cause of the attack by Fulbe youngsters on a Tupuri settlement in Mayo Kobo in 1998 in which several men died is reported to be the disappearance of some Fulbe donkeys, and the idea harboured by the Fulbe that these Tupuri had stolen their animals. Possibly the whole event can be retraced to traditional habits of initiation deeds in the form of livestock theft. These acts occur(ed) abundantly (and mutually) between nomadic cattle keepers and Tupuri.

already discussed basic 'military' strategies. A large number of these young men do not have direct (or future) interests in the disputed area. Also, the adult and adolescent sons in the herders' group are annoyed and regularly express their desire to stand up for what they perceive as their rights.

Thus, in all three cases, minor violent events revealed a build-up of tension, without this having (yet) erupted into full-blown violence.

8.1.2 Assertion of rights or other causing factors?

Case 1: Baba Deli

The violence in Baba Deli was perpetrated by a number of farmers and was aimed at fellow villagers who had supported the decision by the authorities and who stood to gain from the new decision. However, the presence of these authorities underpinned the claim to the land by these farmers *vis-à-vis* the authorities. Some of the people that participated in the fight did not have any stake in the pasture fields. Partly it was an escalation of normal behaviour, such as bodily contact, pushing, yelling threats, which are all part and parcel of the way in which Kapsiki express themselves during disputes.

The most important reason for the outbreak of the fight at that moment, and why it escalated, was the anger about the changing of the plans and the unequal treatment of the villagers. Both triggers of anger were mingled with a general feeling of distrust towards the authorities, but also towards fellow villagers. In the group of inhabitants without interests in the pasture zone, the most obvious anger was triggered by the unfair decision by the authorities. Although this may be a sign of fellow villagers' loyalty and strong social ties, the fact that the social fabric in Dzambou shows several cracks makes it more likely that the authorities' behaviour (implemented inequality) causes a strong feeling of insecurity among the rest of the population. "You cannot trust the authorities and their rules." Nevertheless, (some of) the accusations, and especially the violence, focus on the favoured Fulbe settlement inhabitants instead of the State. This may be due to a feeling that fellow villagers are an easier target than the State (attacking a State representative is totally at odds with the respect people should pay to higher placed people, and it may turn out to be a dangerous activity). It is certainly partly due to feelings of jealousy towards the inhabitants of the Fulbe corner because of their very high yields (at least in the eyes of the other Dzambou-ers).

Indeed, most of the Dzambou farmers with fields in the pasture reserve do not consider their problem as a problem with the State. Although they know that the State wants a forest reserve, they go on blaming their fellow villagers who are proponents of the forest pasture reserve for being the ones that instigated the whole conflict. Even the fact that they are favoured by the State is not blamed on the State representatives, but on the Fulbe settlement inhabitants themselves through accusations of bribery.

The difference between the violence that has already occurred and future violence is the extent of the organisation and the trigger. As has already been stated, the violence during the meeting was not inspired by the wish to assert land *per se*. It was the feeling of unequal treatment that triggered the anger and the use of force. The use of violence was not a deliberate choice and it flared up due to people's anger. Future violence may be more organised and have the deliberate purpose of ascertaining the access to, use of and even ownership of the fields.

How these farmers will defend their long-term interests in the pasture zone in reality is not yet clear, but their plans are. Several people say they will not let go. “We just clear our fields and continue using them, although those cattle keepers do not like it. If they damage our crops we will kill them and their herds. The only way to stop us would be to send a large number of armed police.” Although the focus would be on land security (and thus a tactic for ascertaining of rights to land), the direct cause of a violent outbreak would still be people’s anger at being treated unequally. “Why should they use fields in the pasture area while we are forbidden from doing so?”

For those who continue to use pasture fields, future violence can again be ad hoc and based on direct anger, but then as a result of crop damage and, for example, an encounter with a herdsman who has not checked his cattle (or the reverse, namely a herdsman or proponent of the pasture who catches a farmer red-handed who is clearing a new field or cutting a tree for fuel or construction wood). These ad hoc encounters risk leading to larger scale violence if the above-mentioned dedicated young men devise plans to help each other in such cases.

In short, the violent event that took place during the Baba Deli meeting was for the most part caused by ‘other factors’, although the ascertaining of rights to the land did play a role somewhere deep down in the reasoning and feelings of the actors. At first, pasture field owners gave up their rights and claims. They did so during the Mogodé meeting and by way of a mandate given to their representatives. However, the accord was not given wholeheartedly. Within the power structures they felt they had no alternative but to give in. However, they did so reluctantly and were still acutely aware of the loss of a large area offering (future) agricultural possibilities. When they discovered that another option had been open to others and that these people had used that option, that others had not given up their claims and, indeed, had been successful, their frustration boiled over. The whole process made them reconsider their earlier agreement with the pasture reserve as such, and the former reluctance now changed into total rejection. To underpin this ‘sudden’ rejection, they sought (and found) several substantial arguments, namely the inequality, the lack of justice in the democratic State of Cameroon, the bad governance shown by the sudden alteration in the authorities’ decisions (which was also inexplicable given that nothing had changed in the past two months) and the history of ownership and use of the area[7].

Now, after the violent event (or after the complex of factors that led to the violence), some of the pasture field owners reasserted the rights to their lands and did so more fiercely. Because of the violent event and the factors that caused it, these people acquired a kind of ‘violent mood’.

The pro-reserve inhabitants of Dzambou do not refer to the use of violence in the future. They expect the State to defend the reserve. However, they did fight back when they were attacked at the Baba Deli meeting and they strongly counter threatening remarks with the warning that they will not flee. There is no reason to think these pasture reserve proponents will refrain from resistance in the event of a direct attack in the future. Nevertheless, the plans of the agitated young farmers are directed more at resisting the State than at assailing pro-pasture fellow villagers.

The ambiguity towards the State in this case can be explained by the ambiguity of the State’s roles and position. In theory, the State is indispensable as an institution to defend

[7] Past violent events and the memories of violent behaviour of the current opponents did not seem to have any influence.

(minority) rights and property. It sets the rules and, specifically, boundaries related to the planned destination of a piece of land. Negotiations on such boundaries need to involve the State. However, in the reality of Cameroon, the State is a puppet in the hands of the rich (that is: those who pay the most) or those who are otherwise able to manipulate the State's objectives. This means that any time the State responds in a sudden and 'strange' way, one can only conclude that bribes are involved. Such bribery can only be performed by the opposing party. Then, this other party is the one that is blamed and is the focus of angry responses.

Case 2: Kobo-Kolara

The violence in the Diamaré (verbal abuse and threats) does not always have a rights-ascertaining origin. From time to time, at least, it is based on ethnic controversies (sometimes only historical ones) or traditions like initiation rules and habits. In addition, since time immemorial, crop damage by cattle has led to (violent) quarrels between herders and farmers[8]. Nevertheless, most of the threats expressed in the study area involve the perceived loss of, and threats to, 'territory'. Reviling opponents, verbal abuse and threats start at the moment that a nomad arrives at his camp site and finds it occupied by new settlements or when he follows his normal track through the bush towards a rich forage spot or watering place and this road is blocked by fields in which a cultivator is busy working. If the farmer is not present, the herder will not waste words on the matter but will just send his herd into the crops. Of course this will lead to angry farmers. An encounter between the victim of the crop damage and the (or an) owner of (the) cattle will at least start off a series of verbal confrontations. Often these are accompanied by threats against the life or property of the other.

The fact that people do not feel backed by the State can also play a role in why they resort to violence. Then it is the ever-continuing investment of effort and money in ascertaining rights to the land that leads to frustration. In that situation the chicanery of the authorities makes people choose the violent path in their endeavour to reach certainty over the land. In such a case they may have learned that it is better to leave the authorities outside their conflicts. For the time being it seems as if in one family or in one group two strategies are used at the same time (or at least alternating): the non-violent, aimed-at-the-State path is discussed in the next sub-section.

The actual low scale violence of threats and verbal abuse can easily escalate into real physical encounters, as happened in the direct vicinity. As shown in socio-biological studies[9], younger males take and get (from the elders) the right to explore new paths in society, some of which involve the use of force. If small-scale violence by some youngsters pays off, it will be used more often and by a more extended group in the future. On the other hand, violence can go too far and the result may be that those involved have to retreat even further than would otherwise have been necessary[10].

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[8] Moritz (2003) mentions that herders even consider themselves to be good cattle keepers when they deliberately send their herds into fields, because then they give the animals the best food possible.

[9] De Waal (1996, 1998) or Strum (1987).

[10] As in the example of Van der Ploeg (2001): after the attack by Fulbe youngsters of the Tupuri settlement and the resulting casualties, the nomad families involved retreated totally from the region and their ancestral campsites.

Case 3: Kubadje-Jiksa

In the Jiksa-Kubadje zone the violent events came about after a build-up of frustrations over crop damage and cattle-route blocking. At first, especially when the number of new users was not very high and the herders could avoid the new fields, occasional incidents of cattle that walked into fields led to peaceful attempts from both sides to persuade the adverse party that the land was not his. That he should not develop fields in an area that belonged to herders or, from the other perspective, that he should not herd his cattle in an area meant to be used for agriculture. With an increase of new fields and no positive response to previous demands to leave the area, together with no effective conflict resolution interventions of authorities, both farmers and cattle keepers became annoyed. They started to underline the persuasion they expressed with minor threats, then with bigger threats and then with minor expressions of violence. Thus, although triggered by the interference they encountered with actual (physical) needs and influenced by absence of effective State (or other mediators) activities, the violence is based on the wish to ascertain the rights to this piece of land. Specifically the future rights to good land are the concern of the actors.

The talks and plans of several youngsters in Oudda may be seen as signs of loyalty towards village members (especially when these youngsters do not have direct interests in the Jiksa area). More than once, the expression of this loyalty has been driven by the perceived option to maintain or raise one's standing in the village or village neighbourhood via the voicing of unrestricted group membership[11]. In addition to that, the memory of the heroic past, that is the fight against the Kapsiki of Kila, made people think they would win again. Indeed, the story was told several times, especially to older boys and young men, with the result that they re-told it and referred to it when talking about their plans. It had the effect of making any attack a defensive and not an aggressive one, thereby giving it more legitimacy and therefore lowering the threshold

Figure 8.2 Categories of actors at t = 0

	With original stake in natural resource	Without original stake in natural resource	
		Stake is picked up	No present stake in natural resource
Violent	Goal seeking	Goal seeking - solidarity - own (future) stake is newly recognised	Other motivations (e.g. historical controversies; power seeking; fun)
Non-violent	Goal seeking	Goal seeking - solidarity - own (future) stake is newly recognised	Leaving it as it is
	Yielding[a] Avoiding		

[a] = for the difference between yielding (withdrawing in a later phase, when challenged) and avoiding (not entering the contested area at all): see Rubin *et al* (1994) in chapter 2.
Of course at t = 1, actors may have changed position and become a 'member' of another category. For example, some actors start with the clearing of family fields in a pasture area and try to safeguard the right to that piece of land, but later on they withdraw from the region. Then, they yield at t = 1.

[11] In some cases I even thought that their heroic words were intended to impress local girls, but any inquiries I made concerning this (to the girls or the men) always provoked negative responses.

8.1.3 Description of the non-violent path

Each of the cases studied included non-violent groups. Within these groups, three interesting types of actors can be detected: 1) those actors who try to reach their goal, 2) those who not only refrain from violence but also from their goal and 3) those actors whose direct interests are not at stake in the conflict, but who nevertheless become involved. Figure 8.2 shows a list of all categories of actors in this stage of the VoE diagram (see also Figure 8.1, t = 0).

Case 1: Baba Deli

In Dzambou the majority of the people that were present at the last village meeting in Baba Deli (where the paint to mark the boundary trees was distributed) did not resort to violence. For some of them the instalment of the pasture reserve did not affect their interests. They were only present out of curiosity or because a village meeting is something villagers have to attend. Others owned or used pasture fields, but refrained from violence because they did not consider that to be a good strategy for safeguarding access to these fields (or because they are not that strong and/or are afraid of getting hurt or even imprisoned, based on past experiences or accounts, etc). Several of these people said that, in the presence of State authorities, one "should be careful not to get a bad name".

Indeed, some of this group gave up their goal – the defence of their fields – altogether. Initially they stated a claim, but after the decision of the sub-prefect they even stopped using the land in the pasture forest reserve. These people considered a good relationship with the authorities to be more important than access to pasture fields. Their yielding served another, more social-political security. They explain their behaviour by referring to their powerlessness regarding the State. Partly this attitude springs from experiences of older people. When they were younger, during the colonial period and directly after independence, the State was eager to use force against those who did not obey its orders[12]. In addition, those elderly people are mostly not very well educated and do not know the rights associated with (current) Cameroonian citizenship.

Ideally, when it is clear that two different actor(group)s have claims to the same piece of land, a mutual solution is sought. Some of the people involved, but also other villagers (for example local chiefs) expressed compromises relating to both pasture land conservation and continued farming. Solutions that combine these two with the State objective of the installation and maintenance of forests were not expressed[13]. A search for a real solution has not (yet) begun. Apart from the State decrees for meetings that are in fact only intended to inform villagers and not let them have any influence in decisions, there are no initiatives to bring the three groups together. Thus, they cannot search collectively, on the basis of cooperation, for mutually satisfying possibilities.

Case 2: Kobo-Kolara

In the Diamaré bush none of the actors belong to the categories without original stakes in the resource. Most new cultivators just started their fields and settlements and kept quiet. In that way they tried to avoid violent encounters. The cultivators say they do not intend to make the herders disappear as long as they try to keep their cattle out of their fields: "The bush is big

[12] Here 'event memory' (learning) helps to make people refrain from violence.

[13] This demonstrates more clearly the fact that the conflict is not considered to be a discord with the authorities.

enough". This seems to be the wisest tactic because keeping the authorities out of the dispute increases the possibilities for the farmers to carry on acquiring areas of the bush.

Sometimes, cultivators that started fields in the bush later go back to the surrounding villages or migrate even further away. The reason for this retreat, though, is not that they have yielded to the other party but rather to the difficulties of the Diamaré bush, such as the lack of water or the presence of elephants during the agricultural season.

Most of the herders do not resort to violence either. Even when they find their rainy season camp sites occupied, they just search for another place. They explain that it is shameful to chase other herders away and sometimes this even applies to farmers. They (mostly) decide to leave the area. They are the yielding group (as long as they indeed have other areas to go to[14]). Sometimes they complain to the local *lawan* about the loss of their camp site, because he is the chief of the land and it is his job to make intruders leave. But violence … "that is no option, because the authorities would punish you badly. Haven't you heard of the *ardos*[15] of Mayo Kobo who are imprisoned?"[16]

In this case again, only outsiders tried to think of problem-solving strategies. However, until now, nothing has been implemented and this situation is unlikely to change in the foreseeable future without outside help.

Case 3: Kubadje-Jiksa

In Oudda most of the farmers of the Jiksa zone did not want to use violence. They only wanted to use their ancestors' fields. Most of them indeed just used their fields, cleared new ones when they thought it necessary and guarded against intruding cattle. The herders on the other hand talked a lot about the problem of losing their grazing land and corridors but choose (as yet) to muddle on. They are trying to avoid damage in the ever-advancing fields and, in the back of their heads, they are weighing up the different options, such as the option of moving away.

There were no farmers of the Jiksa corner who proposed the installation of problem-solving institutions and systems to search for methods whereby the interests of both user-groups can be met. Only outside the group of users and/or owners of Jiksa fields, that is outside the group of people directly involved, did certain Oudda inhabitants try to think about mutual solutions like a rotation system of fields and pasture area. This involvement is due to feelings of general solidarity with both groups and a certain 'village feeling' of not wanting to encounter big (and perhaps escalating) problems. However, a meeting to discuss options with both stakeholding groups together has not (yet) been organised. Within the group of herders, a certain hard-headedness has been expressed: "We cannot move. Our houses are here. It is too much of an effort to rebuild them elsewhere." But this may be just a tactic. It is not wise to tell your adversaries about all the options open to you in advance.

Most of the Oudda inhabitants without an original stake in the Jiksa zone left the situation as it was. They did not interfere. They did not even show up at discussions or at the demon-

[14] These other areas may quickly disappear: in the Adamaoua region for example the number of cattle is rising quickly and the Benoue National Park authorities have become very strict in the defence of the park boundaries.

[15] The word *ardo* is a Fulfulde word roughly meaning 'the chief of a group of nomads', comparable with the '*djaoro*' of a neighbourhood.

[16] This is the reverse of the kind of learning Sandole (1993) mentions: negative experiences inhibit the expression of people's inherent violent proneness.

stration of the location of the boundary by the two outer neighbourhoods and some inhabitants of Oudda Centre (see in section 8.2, the assertion section).

8.1.4 What are the similarities between the three cases?

The violence in our three cases does not seem to be driven by extended deliberations beforehand aimed at long-term gains. Most of the time the direct cause was just anger: uncontrolled anger at sudden, acute threats to subsistence (a fear of real deprivation, not based on scarcity of resources but on damage to belongings without proper reimbursement), a disturbance of habits and expectations or feelings of injustice and insecurity because of arbitrary State actions[17]. For some people the anger was exacerbated because they suspected their adversaries of bribery of the authorities. Bringing these accusations into the open and experiencing that others had the same perception offered them some scapegoats that were easier to attack than the State[18]. Thus, the violence in the three cases was a non-rational physiological reaction[19] to acute threats to basic needs, whether physical or meta-physical.

Part of the violence was instigated by solidarity feelings of farmers without a direct interest in the natural resource itself. Social identity (perhaps deliberately formed in the rights ascertaining phase, but not aimed *per se* at making allies for the sake of violent outbreaks[20]) is combined with personal identity feelings based on an expression of solidarity and autonomy.

In theory, in new settlements, such as those in Kolara-Kobo, social capital and a collective identity have to be built and that takes time. The fact that all settlers are in the same position and have to rely on each other increases the rate of the process. Having the same enemy binds people together, but also makes them resort to violence more quickly, especially when violence-curbing institutions are far away and when they think (and fear) that the other party will react in the same way. The pre-emptive strike can seem to be indispensable. Then, even without real social capital, same interests may quickly evolve in collective violent action.

Future violence may be used strategically. Several younger, more highly educated owners of fields in the areas newly entered are discussing violent options to ascertain definitively their position on the land. A rational calculation has been carried out as regards the monetary and societal costs of the use of violence versus the benefits and the chances of reaching the goal. Absence or unreliable conduct by the State or State representatives triggers the strategy of taking one's rights into one's own hands.

With their contribution to the aggressive plans and their (future) actual assistance in attacks, the people without pasture field interests invest heavily in their social capital and that of the existing village. This phenomenon can only be seen when the new area is entered by members of an already (elsewhere) existing society. In the case of the Diamaré the new users may have the same ethnicity, but geographically they are not from the same society. Therefore, they cannot expect armed help from outside the settlement. Whether or not the

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[17] In short, an unbearable growth of frustration fuelled by a (perceived) discrepancy between the actual level of fulfilment of needs (whether physical of meta-physical) and somatic and mental well-being on the one hand and the level that the actor thinks is reachable and right on the other.

[18] Once again, this was not a deliberate strategy in search of scapegoats; the situation offered it and it was willingly accepted.

[19] See chapter 2: the list of causes, by Sandole (1993: 20-21).

[20] Deliberate social identity formations can be invested in, for example, to acquire witnesses concerning ownership status *vis-à-vis* the authorities.

members of a same society will indeed come to the aid of their fellow farmers (or herders[21]) when armed allies are needed, remains to be seen. Sometimes the expressed loyalty is in fact only an expression of own worries about interests that may be threatened in the future. Involvement in an organised fight will be subject to a rational cost-benefit analysis. Future abstract threats do not weigh heavily.

The difference between the first case and the other two is that the State is only party in the first one. In the other two cases different authorities are involved, but not as representatives of State interests. In such circumstances it is of no use to show off one's own interests and strength to the State but instead only towards other users and individual power-bearers. When the State is party, threats to and even the use of violence against the State representatives may be considered[22]. In most cases the use of violence is thought to diminish the support of the State, including when this State has no direct interests itself. Only some of the youngsters suggest that violence aimed at the other users (thus not against the State itself) will help the State to step in for them. "They will see that it is really our land, otherwise we would not risk our lives for it".

All the deliberate uses of violence are only implemented when the group involved can count on some success. For example, violence is considered to be worthwhile when the State institutions with the task of maintaining order are too far away or are too weak, especially in comparison with the possible rate of ally formation. People are already making calculations about an armed response and the possibility that their adversaries may involve allies in a short enough time. As yet, in the three cases, the violence is small-scale and short in duration because the actors (still) respect the State and its violence-suppressing institutions. This contradicts all the remarks about a weak State in the North of Cameroon. At the same time it confirms deliberations that a weak State can cause conflicts and violence to escalate[23].

It seems as if, in the case of actors that still want to reach their goal, the non-violent strategy is backed up by the deliberations that "low profile behaviour" and "not attracting attention" is the best way to succeed in the fulfilment of basic needs. When people come out into the open, they do so collectively. The State is still considered as strong enough to frighten people away from the use of violence or strong statements. Most actors involved do not trust either the other party or outsiders enough to expect successful conflict resolution. Therefore, they do not invest in lobbying or the establishment of consultancy platforms.

Many herders refrain from violence because they do not consider themselves strong enough. They consist of small, dispersed groups that cannot mobilise allies quickly enough.

Thus, in all three cases safeguarding the (access to and use of) natural resources is not the only reason to resort to violence. Not all people refrain from violence because from time to time

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[21] In the cases studied no plans of herders were detected to come to the aid of another nomadic or cattle keeping group. Within the nomadic family, solidarity and future assistance were expressed. Only in the Kubadje-Jiksa case could the cattle keepers (theoretically) rely on their farming co-villagers of Kila, who (at least those that knew of the discord with the Oudda farmers) promised to help "our" Fulbe in case of an attack by southerners. Solidarity seemed to have been built on geographical identities, imposed by higher authorities.

[22] To discredit or even hit the State, groups that should be protected by that State can be attacked (as was done in Iraq to discredit the US after the war against Saddam Hussein in 2003) but in none of the three cases this complex strategy is the reason behind the violence.

[23] For the reasoning that a strong State may trigger conflicts: see Nguiffo (forthcoming).

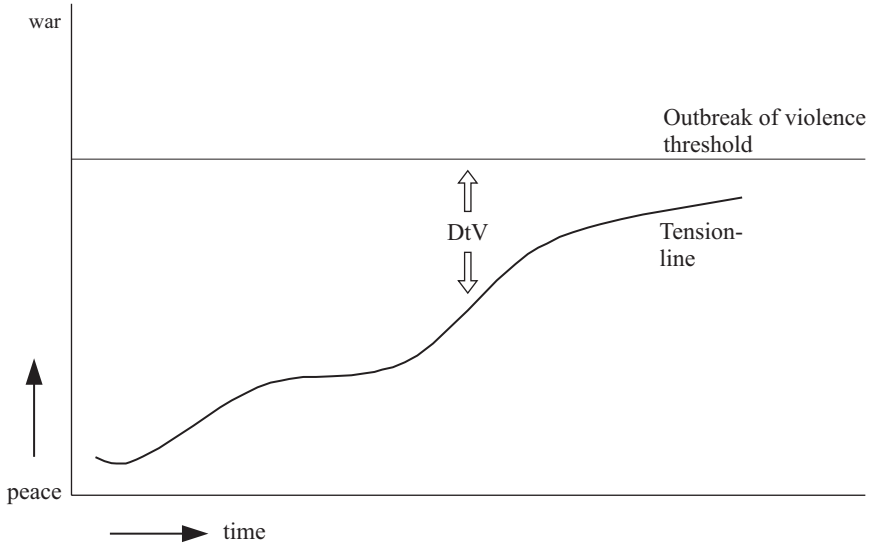
they are overwhelmed by anger and act irrationally, being struck by overflowing frustrations. On other occasions young, strong and educated men in particular consider violence as a good option to underpin their claim *vis-à-vis* the authorities or to frighten away adversaries. However, the plans to implement this strategy are still in the making. However, the absence of sanctions against small-scale (ad hoc) violence may lead to new (and larger) violent outbreaks, because of the learning aspect[24].

8.1.5 Theorising Box 4

In the preceding sections, the start of the analysis at the events, as Vayda and Walters (1999) advised, have led to the description of mixtures of calculated and eruptive violence. The causes thereof differed from rational to irrational. In short, looking back on the three cases, it seems necessary to enrich the conceptualisation of Box 4 by making a more explicit distinction between the two types of violence. Untangling the "chains of causes and effects" (id: 169), therefore demands different approaches. Rational action is open to rational explanation. Irrational action requires a more hermeneutic, that is 'intuitive', method.

In general, security scientists and politicians are more interested in calculated violence[25] because that seems to risk resulting quicker in large-scale outbreaks[26]. Nevertheless, irrational eruptions of violence are of interest because they are signs of a small distance between, what I call here, the 'tension line' in a society and the 'outbreak of violence threshold' (see Figure 8.3).

Figure 8.3 *Distance to Violence* (DtV = Distance to Violence)



The tension line may be conceptualised as caused by more rational factors and have lower dynamics than the eruption of frustration that we encountered in the case studies. Eruptions of

[24] See Chapter 2: Sandole (1993: 20-21).

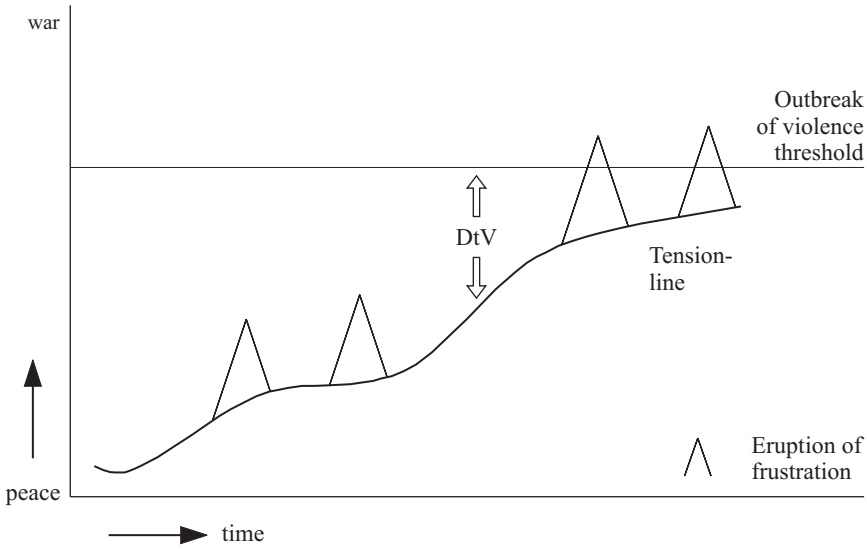
[25] However manipulated the calculation may be by 'leaders'.

[26] Premeditated, large-scale violence is not to be expected in the near future in any of the three cases. The number of groups involved in strategic 'military' planning (calculated violence) is too small and the build-up of supporting 'troops from outside' has (yet) to be started. Nevertheless, such a process can gather momentum quickly.

frustration may be regarded as being superimposed on the tension line (Figure 8.4). The degree of the eruption together with the Distance to Violence (DtV) determines whether or not such an eruption crosses the Outbreak of Violence Threshold.

When tensions in society or between members of society are low or non-existent, the 'tension line' is near the base line (left side of Fig. 8.3 and 8.4). Rising tensions, for whatever reason, cause the tension line to rise, until it might finally reach the Outbreak of Violence Threshold line and violence will start. In other words if, as shown in Figure 8.5, the tension line crosses the Outbreak of Violence Threshold, systematic and relatively calculated violence begins, although violent eruptions also then take place. The distance between the level of the tension line and the violence threshold line (called "Distance to Violence"= DtV) is indicative for the risk of a society to end up in (large-scale) violence. When the DtV is large, a small frustration eruption will not surpass the Violence Threshold (left side of Fig 8.4). With a small DtV small frustrations can lead to eruptive violence (right side of Fig 8.4). Conversely, if (series of) violence eruptions can be found based on relatively small frustrations, the conclusion has to be that such a society suffers from a small DtV and, therefore, has come within the reach of larger scale violence.

Figure 8.4 Frustration eruption in cases of a large or small 'Distance to Violence'



Theoretically speaking, a large DtV can be bridged by one sufficiently large bout of frustration. If this is a one-off event, it generally concerns just one person because otherwise the tension line would be higher. In other words, a low tension line means a peaceful situation. The large gap in the direction of the violence threshold line can, for example, be bridged by somebody who suddenly becomes totally mad about something. In most cases like this the situation quickly returns to normal with the help of other society members[27]. On the other hand, as can

[27] A good example, and one that also stresses the influence of culture on the position of the societal tension line and thus on the reactions of society members to such 'mad' outbreaks, is described by Kpomassie (1998) in his anthropological report of a year on Greenland. The long dark winters at the high latitude and the transition to the totally different other season often causes depressions and madness of inhabitants that may lead to homicide. Yet, to Kpomassie's African astonishment, the Inuit society does not react with revenge, but with understanding and placation of the victim's family.

be seen by reactions to crop damage in the past, sufficiently large frustrations do occur frequently[28]. Thus, what is important is not the frequency of violent eruptions but the underlying DtV width and the reasons for the place of the 'tension line'.

In other words, eruptions of frustrations are inherent to life. In the case of violent eruptions the frustration is the direct explanation but it does not provide any answer to the question of why this type of frustration resulted in violence on this occasion. Nor does it give any indication about the direction of the 'tension line' in the near future. For a further analysis of the situation and in order to acquire a greater insight into the violent event, not the 'why' of the event itself is of interest but the reason for the small DtV. Why and how did this small DtV come into being?

As can be infered from the deliberations about future violence in the preceding sections, another, related question concerns the result, the effect of the transgression of the violence threshold. Whether or not the cause of the transgression is itself interesting, the actors and the rest of their society have learned from the violent eruption. Because of this, the DtV will change. Once actors have learned that resorting to violence does not help, and they start to look for other solutions, the tension line may lower[29]. It will rise when the actors have had (some) success or when they have learned that more calculated violence is suitable. In the worst cases, the tension line may even surpass the violence threshold as a result of which DtV is zero and calculated violence begins[30] (see Fig. 8.5).

For example in the case of Jiksa-Kubadje a series of frustrations (about bush clearances or, on the other hand, crop damage) without violent expression because the general tension was low (left side of Fig. 8.4), but also without solutions to the causes of the frustrations, made the tension line gradually rise. At this moment, therefore, eruptions of frustration may easily surpass the Outbreak of Violence Threshold (right side of Fig. 8.4). It is to be expected that, without any measures, this process will continue and finally the tension line will surpass the threshold line (Fig. 8.5).

In the Diamaré the tension line seems to rise with every encounter between pastoralists and agriculturalists. Now that actors have learned of the treachery of the authorities, the line has 'jumped' to a higher level. From this point, threats may easily lead to the temporarily surpassing of the Outbreak of Violence Threshold line (right side of Fig. 8.4). Such violent threats in themselves cause the tension line to rise further, until it may surpass the Threshold line (right side of Fig. 8.5).

At the moment of the clash in the Baba Deli case, the DtV was not very small, but the amount of anger was so high that it surpassed this distance and, indeed, violence erupted. However, the actors could see that the violence did not help. The State persisted and did not change the boundaries again, let alone cancel the whole project. The learning effect made it clear to the actors that they should not re-try the same 'ad hoc' violence aimed at pro-reserve

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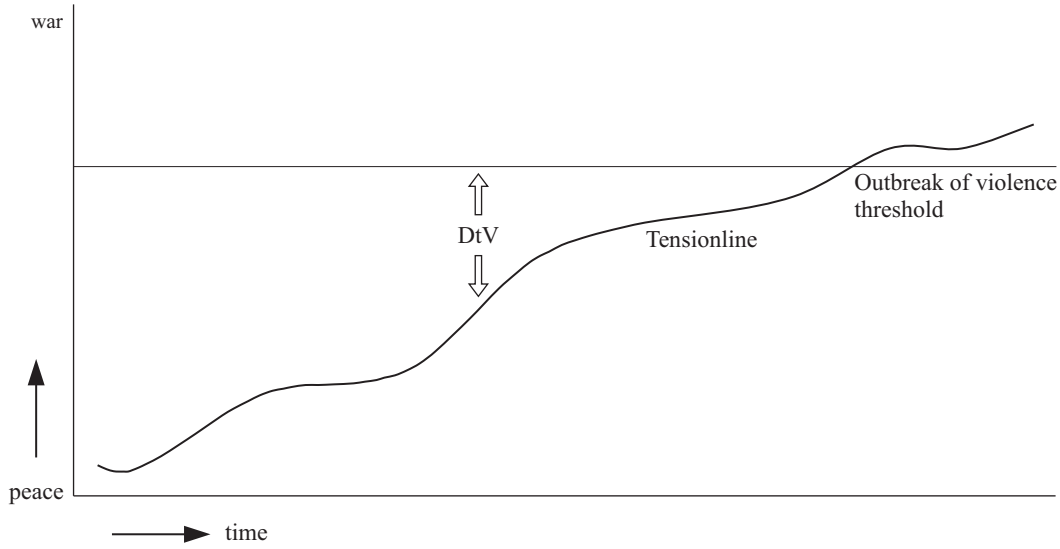
[28] For example, Breusers *et al* (1998) describes the already very frequent conflicts and even violent outbreaks at the beginning of the last century between Fulbe herdsmen and Mossi farmers in Burkina Faso.

[29] This learning effect of a negative cost-benefit relationship for the use of violence can be a direct one, or can traverse decennia. For example, the Kapsiki experience with violence during the colonial times heightens the position of their violence threshold. The pride of the Tupuri of their resistance to the Fulbe could make their violence threshold against those Fulbe lower (see chapter 5: this effect is not seen).

[30] See Sandole (1999) about the causes of continuation of violent conflict.

villagers. Aroused by the whole event, their strategies are now more calculated. Although some may now wish to work towards peace, others are more inclined to resort to premeditated violence. On the whole, the DtV seems to have decreased.

Figure 8.5 Distance to Violence reaches zero



In short, questions to be posed in Box 4 are:
- What is the violent event?
- What is the effect of this event? What have the actors learned?
- Is the event indicative for a small DtV?
- If yes, what are the origins and causes of this small DtV?

This last question leads us to Box 3 (section 2).

8.2 The assertion of rights

1 Description of assertion of rights.
2 a. Is it caused by entry into a new niche?
  b. Is it caused by other factors?
  c. Why do not all actors use the escape route of non-assertion?
3 What are the similarities between the three cases?

8.2.1 Description of assertion of rights

One of the causes of violent threats and the violent outbreaks is the wish to ascertain the right to land. This is depicted in Box 3 of the VoE diagram. Assertion of rights is only necessary when other people have claims on the same resource.

Case 1: Baba Deli

In the argumentation between the two groups of inhabitants of Dzambou the entering group tries to assert its rights with claims of ancestors' clearance activities. In the traditional tenure

system, this means that these fields are the property of those ancestors' offspring. The fact that the land has been fallow for some decades does not play any role. Even people that borrow or rent fields in the new area express their rights of access and use to be based on the rights of the traditional owners.

All owners and users, and even several of the inhabitants without direct land interests strengthen their arguments with the calculation that a pasture reserve is unnecessary in this village. There is only a small number of cattle combined with a large space of fallow fields between the compounds, where these cattle can graze. Apart from the ancestral rights (that are not acknowledged by State law), the reserve-opponents do not refer to reasons why they should have more rights to cultivate than the State has to allow big trees to grow.

The other party does not claim personal or primordial rights but refers to collective historical agreements between the first clearers and cattle keepers. Their claim is that it has been agreed that the pasture area is to be a pasture reserve and to remain so forever. These arguments are, in turn, contradicted by the pasture field owners, in a kind of "yes-or-no" game. The pro-pasture group refers to the State plans of a forest reserve and the conservation of big trees because it benefits their interests to have the same arguments as the powerful State.

It is not only necessary to ascertain claims to the land towards other users, but also towards the State because that is the entity that decides about the factual establishment of the pasture forest reserve, the exact place and boundaries thereof, the right to graze cattle without fear of crop damage (that is: without the obligation of reimbursements), and even possible permission to continue agriculture after the instalment. One way of persuading State representatives is by corruption. According to the anti-pasture farmers, the pro-pasture inhabitants bribed the sub-prefect and *lamido* of Mogodé, and maybe also the police superintendent and the line-agencies of animal husbandry and agriculture. If this is true, they did so to ascertain their rights to the corner of the pasture where they have their compounds and fields[31].

In this special case an ownership claim towards the State could also be expressed via the list of 'owners' (= actual users) of the sub-prefect. In reality this list does not comprise all owners according to the traditions, because some did not come to the session and others were not accepted by the authorities[32]. Moreover, neither were all users incorporated because several of the lessees and borrowers did not register. They did not consider themselves as owners, although according to State law they do have this status as 'developers'[33].

Case 2: Kolara-Kobo

In the Diamaré bush the newly arriving Tupuri also refer to the past and to primordial rights. By doing so they claim collective rights. The Fulbe came later and used force to occupy the region, they say. At the same time the farmers use arguments based on State law. But when

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[31] If this is (again) true, it is a very opportunistic move by the regional authorities for personal profit. At first they satisfied the majority of the farmers with a delineation of the pasture in a way that everybody, including the Fulbe settlement farmers, would lose their fields (and the latter their compounds as well). Later, they had themselves paid to change the boundaries again. Meanwhile, they deny any bribery by referring to the fact that it is only natural for the Fulbe neighbourhood to remain (in the words of the *lamido* and the sub-prefect: "where else should those people go?"), but why then did they decide differently in the first place?

[32] Namely, those with ownership claims, but who did not use the fields at the moment of registration.

[33] See chapter 4: the legal situation about land tenure.

others do the same (like the settled Fulbe of Gadjia[34]), they protest and explain that the law has been wrongly interpreted. Individual farmers mostly claim rights to individual fields, but not to whole areas. These claims are strengthened in the event of (the risk of) crop damage. Then, the claim pertains to yields of sown crops. In almost all cases, the claim to the land is also made on behalf of sons. Family fathers have moved to the bush to clear new fields for their (future) offspring.

The herders in turn mention the fact that their ancestors already camped in this area long ago on specific camp sites. They refer to neo-traditional authorities[35] and arrangements, although these are on the verge of disappearing[36]. A lot of them demand that the local *lawan* protect their rights because he is the chief of the land. Sometimes this is done after the discovery of settlers on their camp site, while on other occasions herders try to prevent such entries. Apart from drawing the attention of the *lawan* to cattle keepers' camps, magic is also used to make it impossible for outsiders to use camp sites. Violation of the spell put on such a camp can lead to the death of the intruder. In a way this is a violent way of ascertaining the rights to that specific piece of land. However, it is difficult to be recognised as such by 'rational' western researchers or by a 'rational' State. The entering Tupuri only bother when they know of a spell and when the reputation of the 'camp site owner' with regard to witchcraft adds weight to the threat.

Although certain explicit threats are indeed seen as 'use of violence'[37], other more vague and general threats can be considered as only a description of a possible scenario, to underpin the decidedness of the claim. Whether or not the event just surpasses the violence threshold or not, does not make much difference for the analysis.

According to rumours, both groups try to buy allies among the elites. Indeed, they or their representatives visit the regional headquarters to persuade the authorities to choose their side. Whether or not this is accompanied by the (illegal) transfer of money or cattle remains a secret. In the Cameroonian context it is not totally imaginary.

In the widely reported conflict case over settlement in the Mayo Kobo bush on the village territory of Daram (next to Kobo)[38] different authors mention different amounts of money having changed hands between the newly settled farmers and the Daram or Kobo *lawan*, between the farmers and the sub-prefect of the region, and between the involved herders and the regional *lamido* and/or the administration authorities. Each year again, the herders sought the assistance of authorities, after which the farmers had to counter these actions with their own claims, all of which were underpinned with money, these authors claim. In this special case, therefore, rights had to be asserted over and over again because the authorities had an interest in not solving the problem[39].

Such a pattern cannot be discerned for the area studied in the current research. Newly settling farmers buy permission for, and the legal status of, the hamlet (via an official acknowledgement of the *djaoro*) from the local *lawan* and the regional sub-prefect. Most of the respon-

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[34] See chapter 5, section 6.
[35] See chapter 4, section 1, for the concept of neo-traditional.
[36] See e.g. Moritz, Scholte and Kari (2002).
[37] See the first section of this chapter.
[38] Van der Ploeg (2001); Wassouni (pers. comment); Moritz (forthcoming).
[39] Although the authorities gain by the continuation of the conflict, perhaps their actions are not caused by this interest. Perhaps they do not have the capacity (legally, military etc.) to solve the problem.

dents do not see this as bribery, but as legal fees to be paid for administrative tasks[40]. Whether the focus is on historical rights to the land, rights based on customary rules and rights based on modern State law, each system always demanded a certain payment which is also paid for future services, like contacts with organisations that will help them to construct a water-well. Once the legal right to the area has been established, the new village has the right to such services.

Herders that used to camp in the area do not claim their rights *vis-à-vis* the higher-than-local authorities (perhaps they refrain from that after their experiences in the above mentioned Mayo Kobo case). They try to persuade the local *lawan* of adjacent Kolara, whom they consider to be the chief of the land and who himself is a big cattle-keeper with a certain amount of power in the region, to come up for their rights. But they do not pay him more than they had already paid for obtaining general permission to use the pasture lands.

Trying to adapt the modern land laws in favour of herders by a kind of simple development of the bush, has (as yet) only been done by a couple of sedentary Fulbe in Gadjia (see chapter 5). The possibility of pastoral use remained intact, but they were able to claim ownership rights according to law. This tactic resembles the possibility put forward by certain Kolara-Kobo bush herders of leaving the older people behind to occupy the camp sites while the herds are away. This would be a clear-cut claim to the land, but it has not yet been implemented in the research site[41].

Case 3: Kubadje-Jiksa

In Oudda the same pattern of reference to the past is evident. The cultivators claim both *vis-à-vis* opponents and outsiders that they have the right to use the fields in Jiksa because their ancestors once cleared them. Several of them even state that their ancestors built houses in the contested area and that they only moved because of a lack of water and too many robberies.

Another way of ascertaining the rights to the region is via the route of belonging, that is creating stories of collective identity[42]. Oudda inhabitants state historical claims to the territory via heroic stories of a past in which boundaries were determined. For this strategy the Jiksa owners mobilise fellow villagers with and without direct land interests. Their first-comer rights are implicitly underlined as they do not even address their opponents, but a third party that 'ought to know', because they were present before the opponent group was there. In January 2001, in the actual hamlet territory of the Fulbe in Kubadje, a discussion about the area's boundaries was held between two groups of inhabitants of respectively the neighbouring village Oudda and the rest of the own village Kila. The Fulbe, definitely an actor in the outcome of the discussion, were not even addressed[43]. This strategy of disregarding the Fulbe meant that the Oudda villagers wanted to stress that these Fulbe were mere 'newcomers' and have no rights. To address counter arguments the Bana have collective explanations about the cheating of (and by) former authorities.

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[40] It is very difficult for lower class, non-educated people to be sure of the real fee, fixed by law, for this kind of transactions.

[41] In other areas this is already noticeable. For example in the region near Garoua some Mbororo women stay all year round, while their men-folk go on transhumance (Van Santen, pers. comment, October 2002).

[42] See also Chilver (1996): the invention and telling of stories to make up a collective past and build and claim collective identity bounded to a certain region.

[43] The situation was bizarre. The Fulbe were circling around the Kapsiki-Bana meeting that took place next to their own compounds, but were not interlocutors. They were observers in their own life, so to say.

On the other hand, the adverse users, the Fulbe, claim that the region is theirs, that it was given to them a generation ago by the village chief to live in and that it is meant to be used as pasture. They were there as first users, having encountered an empty bush. Shortly after their arrival their regional chief, the *lamido*, designated the area a pasture reserve, they say. Thus, in this case the claim extends to a higher political level. The two *lamibe* became involved because they both claim the area belonged to their territory. This is only of interest to the local actors as long as the claim of their own *lamido* stresses their own point of view regarding the ownership of the fields. The territory of a certain village or *lamidat* cannot at the same time be the property of inhabitants of another administrative entity[44]. Thus, those Oudda habitants who started to re-use Jiksa back up their *lamido* with the idea that it serves their own interests: if the territory belongs to their *lamido*, the fields are theirs. In a likely, but converse, way the *lamibe* use the farmers' and herders' arguments to underline their own case[45]. Yet, both groups leave the addressing of higher authorities with land and boundary responsibilities to those *lamibe*. Even in the case of crop damage, individual farmers do not seek the help and judgement of higher authorities on the other side of the boundary, because they expect them to take sides like the *lamibe*[46].

The two *lamibe* do not act ambiguously, as reported in the case of other land conflicts in Cameroon (see the Diamaré case above[47]). They have a clear-cut interest and act to defend that. It has to be said that this interest is not based on a scarcity of the natural resource land. Neither are the *lamibe* interested in direct income from the conflict between the users of the land. For example, because all individual claims help a lamido in his own territorial struggle, individual farmers who come to search the help of their *lamido* of Guili against the Fulbe herders of Kubadje do not have to pay at all, or only the normal (= reasonable) price for arbitrage. Their complaints merely serve as arguments in the *lamido's* struggle with higher administrative levels.

Stating a claim to land without entering the area is also possible. A (small) group of yielding cultivators did not think the whole exercise of starting new fields in Jiksa worthwhile. When you have to guard your fields constantly, risk being attacked by herders or risk losing crops because of cattle damage, why take the effort to clear those big trees at all. Some women especially considered it wiser to invest their time and money in other fields. Nevertheless, they fiercely backed up the land claims of their husbands, sometimes encouraging them not to withdraw.

On the one hand, the threats of the herders pay off. On the other hand, it makes the yielding party all the more dedicated to trying to win the case via others. However, this weak sort of ascertaining from a distance cannot be successful without a factual entry by co-members of the same demanding group. For the herders it may be a sign that threats have to be stepped up in order to put off the rest of the group from entering as well.

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[44] This escape was suggested by the chief of Kila, when it emerged in the boundary discussion between him and the Oudda inhabitants, that the historical boundary between the two villages did not fit the actual position of the fields. All the other members of the meeting rejected this possibility: see chapter 7.

[45] For the Guili *lamido* the reasoning is as follows: if the farmers succeed in ascertaining the rights to the Jiksa fields, this area will be registered as a part of his territory.

[46] And thus, going to higher authorities is seen as a waste of money.

[47] In some areas of the Diamaré, authorities without a direct interest in land tend to prolong the conflicts because of their lucrative mediator function.

8.2.2 Entry into new niches or other causing factors? Why not just no rights assertion?
The assertion of rights can also be based on causes other than the entry into a new niche. This is depicted in 'co-causing factors' next to box 3. For the following description the enumeration of diverse actors' categories of Figure 8.2 can be helpful.

Case 1: Baba Deli
In Dzambou, most of the people that make claims to the pasture reserve land have started fields on that new land. Now, these farmers want to be sure that they can continue using those fields. Others, however, try to ascertain rights to pasture fields without having entered them. They perceive future problems or try to use their claims for other gains. In general the outright ascertaining activities only started as a response to the decision of the authorities, which is perceived as unjust.

One of the other reasons to ascertain rights *vis-à-vis* the authorities is that, if the reserve were really to be established, the State would have to buy out registered owners[48]. For Dzambou farmers, thus, it is important to be acknowledged as such. This is the reason that the ownership claim was willingly expressed to the sub-prefect when he started to draw up a list of owners. At that moment, the farmers only counted possible benefits of inscription. They did not count on a continuation of ownership rights of pasture fields, but on direct (monetary) gains. Nevertheless, some owners did not add their names and recoiled from this way of ascertaining rights, because they were afraid of misuse by the authorities[49].

Some of those that started to use land in the pasture reserve did so secretly. They cleared a proportion of the bush, sometimes in the middle of the contested area so that the area was more out of sight. They surrounded it with prickle branches to keep out foraging livestock and wild animals and did not make their presence known to anyone. Of course those who entered the pasture reserve could see that trees and shrubs had disappeared and, later in the year, they could see that crops were growing. However, the user of these fields tried to prevent disputes by guarding his field against crop damage and, when such damage nevertheless occurred, by refraining from complaints. Given the general distrust in the authorities, these farmers thought it a waste of time and money to try to persuade others of their right of use or ownership. They did not reckon that any legal buy-out sum would ever reach any owner. On the contrary, they strongly believed that their adversaries were bribing the State authorities, while they themselves did not have enough cash or kind to do the same. In any case, that approach was too risky.

For the time being, the only strategy they are using is to complain about their hopeless situation (this shows that their goal is still somewhere in their mind), but in the near future they will search for further possibilities to safeguard their basic interests. This will more or less return them to Box 1 of the VoE diagram (see below: section 8.4). It is possible that they will reach Box 3 or even Box 4 somewhere in the future, when their circumstances and the interpretation of their situation have changed. At the moment they only count per year. Some of the farmers who refrained from claims explained that each additional year that they could harvest

[48] Information with regard to this legal aspect was 'rumoured'. Thus, it depended on social networks and education levels as to whether farmers knew and understood. It was not officially announced by State representatives during either of the village meetings.

[49] Being known as someone with claims makes one vulnerable to accusations of rebellion, as the story of the municipality representative, who stood up against the authorities and was subsequently accused of rebellion, shows (see chapter 6.3.4., 'conflict mediation').

from the pasture fields was another good year with abundant yields and a period of rest for their other fields. "Next year we will see…" Making a fuss would attract the attention of the authorities and that would only lead to quicker expulsion, they reckon.

The short-term goal of having just one year of harvest was met by the regional authorities at the moment they rewarded political support given at the parliamentary and municipal elections of 2002. The promise of a vote for the sub-prefect's party (the RDPC[50]) led to permission being granted to continue pasture field use during that specific year. This could be done more easily if the farmer involved refrained from claiming the fields as inalienable property.

Some of the borrowing or renting cultivators of pasture fields admitted that they did not have real rights to the pasture zone at all. As long as they have the opportunity to use these fields they are satisfied, but claims cannot be made. At best they can support the claim of the owners. Some even refrain from that: "We cannot add any new arguments, and we do not want to have problems."

Others, who stated a claim first, later changed their attitude because of a perceived powerlessness *vis-à-vis* the State. To this was added the consideration that one should guard a good relationship with this same State.

The pro-pasture villagers indeed managed to have a good relationship with the regional authorities. Otherwise the location of the boundaries would not have been changed. Their claim for a pasture reserve was not a personal claim. On the contrary, this claim brought with it a risk for personal interests. If the Mogodé meeting plans had been implemented, the Fulbe hamlet inhabitants would have lost their (fertile) fields. Only some of the farmers in the Fulbe corner had such numbers of cattle that a nearby pasture, without the risk of crop damage, served their interests. A smaller number still had so many livestock that they could live from them without agriculture. For the others the reason for their claim is more obscure. They may have a long term, whole-community vision. This means that this group is wise enough to see the necessity of a pasture forest reserve for the whole region, for example to curb desertification. Such a reserve would also serve to secure their future options. However, it is not possible to come up with reasons why the Fulbe hamlet inhabitants have better insights in future risks, possibilities and necessities than the rest of the (sometimes better educated) villagers, and why especially they have a greater need for future cattle grazing land than others. I have to remind readers of the fact that the name 'Fulbe' here is only given because of their Islamic religion and not because of other original Fulbe related cultural aspects, such as cattle-keeping.

Nevertheless, the factor of cattle can play a major role in the strategies of the Fulbe corner inhabitants. We can argue that most of the claims came forth from reasons in the social, rather than in the natural capital sphere. Factors that may play a role are solidarity with surrounding cattle owners as an investment in bonds with the rich, trying to establish a better relationship with the regional *lamido*, because he is the most important traditional authority (and perhaps even more powerful than the officially higher placed sub-prefect) and, thus, aiming to acquire grazing land for his cattle, trying to increase the relationship with the authorities in general because the 'Fulbe' already knew about the State plans for the official establishment of the reserve, they knew they could not block it and they knew also that they had to safeguard their compound corner. A reason that does refer to the natural resource land is the investment in future group interests. Based on a feeling of a shared group identity springing from a mixture

[50] See Chapter 4: All State representatives are more or less forced to be members of the ruling party.

of the same religion, fulbeïsation (among other things this includes the keeping of cattle) and geographical position, people invest in pastureland establishment to maintain the possibility for their offspring to increase the size of their herds.

All considerations have to take the described risk into account. That means that the Fulbe corner inhabitants had considerable trust either in the *lamido* as such (as a brother in religion, or based on other social bonding facts) or in their own possibilities to persuade the authorities (whether or not with money).

Several cattle owners, who stumbled with their herd into crops within the pasture reserve boundaries, tried to settle the raised dispute by just paying the compensation sum demanded. In a way this contradicts their claim of 'pasture for ever'; especially now that the sub-prefect had authorised them to refuse to pay. However, they regarded a certain level of social bonding with fellow villagers as more important than their claim. Indeed, this ambiguity is becoming more and more evident[51].

Case 2: Kobo-Kolara

In the Diamaré many entering farmers leave the assertion of the right to the land to those at group level. On (or before) arrival they ask for permission from the local *djaoro* of the new settlement to start fields and a compound but they do not explain, let alone claim, the why and how of their rights there. In such cases the *djaoros* and interested co-settlers are the ones who have to defend the rights of existence of the whole hamlet.

If individual settlers do claim their rights versus cattle keepers, they do so because they created fields in the bush and now encounter herds in their crops or angry cattle keepers who deny them their right to settle where they are. In those cases the entry into the new niche is the underlying cause of the ascertaining of the rights.

Some people do not stay in the new settlements. After one or two years of disappointing yields, crop damage by wild animals (elephants, birds, etc.) and a troublesome water supply, they withdraw to their former villages or to other new, more promising areas.

Even more herders than cultivators leave. As has been said before, most of them yield and try to find other rainy season camp sites or even other bushes to graze their cattle. Only when explicitly asked during the interviews do they admit to having certain seniority rights in the Kolara-Kobo bush. However, the newcomers cannot and do not claim such rights. Several of the herders explain that they do not even complain to the authorities because they consider the presence of farmers as a sign that the authorities (and especially the chief of the land) approve. Many nomads think that the authorities do not like them and their way of life[52].

Case 3: Kubadje-Jiksa

In Oudda no cultivators without ownership claims use fields in Jiksa. Only women who work on the land of their husbands do not have ownership rights, but they have direct long-lasting[53] inter-

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[51] This feeling can help when real solutions to the conflict are sought.

[52] Apart from the confirmation of this stance seen in the lack of State regulations and policy of favouring nomadic herders or at least handling them equally with farmers, this thought may be true because the majority of State representatives in the Far North are from southern provinces and from settled (farming or city-based) families.

[53] The extent to which this is 'long-lasting' depends on them themselves. The longer they stay with their husband, the longer these rights continue.

est in the claims of their husbands and therefore support these. In short, in Oudda the entry into the new niche has always resulted in the assertion of rights. The expression of those claims, however, often only comes about after encounters with cattle keepers and their animals. For some owners, notably those who have not (yet) started working on Jiksa fields, the asserting of rights started even before the invasion. They underpin the claims of their fellow villagers who invaded Jiksa as soon as these ask for witnesses and, in addition, on any occasion *vis-à-vis* outsiders.

Partly instigated by the *lamido*'s wish to increase (or maintain) his territory, the claim over boundaries was added. For the farmers this was still an assertion of rights after or at the same time of invasion and based on a desire for land. All those who own Jiksa lands but did not start fields there participated in the visit to Kubadje to show and discuss the original boundary position[54]. So for them it was not the entry into a new niche that led to an assertion. Certainly in the case of both *lamibe* their claim has nothing to do with an entry into a new area or the perception of land scarcity now or in the future.

The adverse party never thought of claiming their settlement region. They regarded it as theirs, they paid taxes and let their herds graze there. This implicit ownership of the land had to be made explicit the moment it was threatened by field-clearing farmers. Now they express their rights towards entering farmers in (accidental) encounters, towards visitors and, via their *lawan*, towards the authorities[55].

8.2.3 Similarities between the cases

Most of the time people choose to invade new land on which they (think they or want others to believe they) have certain legitimate rights. In the three cases it only occurred very rarely that new land without claims was entered. For example, some Tupuri from the Diamaré villages or from the Tupuri heartland chose to search for fields further away. After the State-organised movements to the Benoué area in earlier days, there are still Tupuri who go to the south to join their ethnic brothers or start fields on their own. But even there they say they have some rights, namely the rights of a general Cameroonian citizen to use the surface of his country.

People want to have more certainty about actual and future rights of access to and use of land. They want others to acknowledge their rights, to make sure there is no need to go through the whole process again and again, every time with the risk of losing the game. Of course, the local actors know perfectly well that any rights may be challenged again in new circumstances, but they at least want a certain basic security when basic circumstances remain the same. And, although a process of modernisation is recognised by (at least) the younger generation and although, at the same time, several actors acknowledge rising insecurities, for them the basic circumstances have not changed.

In none of the studied areas is the active asserting of rights to the land a continuing process, which was already going on long before the actual threat to the 'ownership' of the land or the other reason to assert rights to land became apparent. Most of the time people just use a certain area or, while not using it, consider the right to use it as generally accepted. Only when this use right is (or seems to be) violated by other users do they deem it necessary to state a claim.

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[54] If they were not hindered in doing so by, for example, disability.

[55] Most probably, the fact that this Fulbe hamlet fulfils a role in the territorial strategies of the *lamido* of Mogodé makes it easier for the Fulbe *lawan* to maintain access to this *lamido* despite his uncooperative behaviour with regard to taxes and modernisations that the lamido wants to be implemented.

Once the threat has been recognised (for example, some farmers in Dzambou have seen the process of establishment of forest pasture reserves elsewhere in the Mandara mountains and feared that their region would be the next target), the process of asserting the rights to land can take years. These years are filled with moments of assertion interchanged with long periods of doing nothing. Of course the 'empty' periods are not spent totally idle and some of the activities will help the ascertaining process later. Once a (temporary) solution has been found, the claiming negotiations can stop for the time being. They will flare up again when deemed necessary, but that is not the same as continuous assertion[56].

Access and use rights are not always connected to ownership. Nevertheless, it seems as if the different users, to be sure of the contested areas, claim their rights in the ownership realm - personal or group ownership - not over use or access only. At first the ascertaining of rights is an ad hoc and personal enterprise, although mostly some deliberations of the collectiveness of the rights are passed beforehand. Later, when the threat to the rights continues, more time is spent on the mobilisation of social networks.

Mostly, both the new users and the present users only base their arguments on traditional tenure rules and history. They claim their rights by addressing the other users, or the authorities[57] or both, or even addressing third parties, deciding whom to address in a rationally calculated process. It is then important whether or not the new niche is indeed entered, who is considered as 'enemy' or as potential ally and which arguments will be used. For example it is useless to express arguments concerning administrative boundaries only towards local opponents.

In short, the assertion of rights is aimed at the (preferably personal) ownership of the area (based on first comer or first clearer rights), often backed up by (perceived and as such mobilised) claimed historical land allocations. All types of capitals can be invested to increase the possibility of gaining the right to the land (for ever). In the natural capital domain this means the use of low value land[58] or natural resources other than land such as trees or water resources[59]. If actors were to have the possibility to capitalise high value land, they would not experience the necessity to ascertain rights to new land.

On the other hand, it is possible to invest in natural capital to try to ascertain rights therein. As has been said, entering a piece of land is a kind of claim. Subsequent maintenance and amelioration of that piece of land would be strong reinforcements of this claim. Because in all cases the new land is entered because of its high quality, investment in additional quality would have

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[56] Although Berry's statement (1993) is true, "that the negotiability of rules and relationships is one of the fundamental characteristics of African societies" (Juul and Lund 2002a: 5), that does not mean that these negotiations are always and at all times being executed. Maintaining or increasing one's social position in general does not mean that that is always related to the assertion of property rights (to land, in an agricultural society), as is suggested.

[57] I deliberately use the term 'authorities' to denote one of the two entities that an actor can address. With this term, I choose not to use the term 'State' as the single unit that may be thought of when using the term 'authority'. Apart from the State that in itself is a bundle of institutions, all represented by different persons (or groups of persons), non-State authorities also exist.

[58] The idea of using low value land to invest and gain high value land can be seen in the proposals of several inhabitants to change the position of the pasture towards the infertile fields. However, this type of investment has to be a collective one (non-pasture field owners also have to be involved to make the new pasture big enough and continuous) and therefore can only work via investment in social capital. In reality an investment as such has not (yet) be made. In addition, it is only feasible when the conflict does not involve the (State) goal of forestry.

[59] In communities where access to water wells is not open to all (e.g. not for visiting cattle keepers), access to land can theoretically be bartered for access to water. In the cases studied, this is not an issue.

been a sign of an ascertaining activity. However, apart from the necessary clearing of the fields, in none of the three cases were any quality-improving measures implemented[60].

In the human capital sphere, education and information are good starting points on which to make a stronger claim. One knows what to say and when, what one needs or what others' rights are. Small groups of actors use those amongst them with special capacities of persuasion to act as their spokesmen. This kind of 'intellectual' capital does not run out when it is used. Indeed, both in Oudda as well as in Dzambou these factors play a big role. In the Diamaré as well, *djaoro*s and other chiefs are sent out to assert claims. They are chosen not only because of their high human capital, but more so because of their social position[61] and therefore their social capital.

In addition, even physical strength and health are factors which can be brought to bear. These two qualities can, however, be lost if, for example, they are used in a fight and the actor is wounded or when the user is arrested and put in prison. However, this did not occur in the three cases[62]. Strength and health are used in the clearing of the new land, and in the building of other capitals that may support the assertion of rights.

In the economic realm, investment of capital to assert rights would mean buying or renting the desired new land, preferably with official ownership or long-term user right (from officially registered owners) papers. This was not done in any of the cases. It was not possible because of the excessively complex and expensive registration procedures[63]. The (probable) donations to authorities can be seen as economic investments in the socio-political domain. These socio-political investments in turn can (perhaps) be capitalised with a certain amount of pressure.

Plenty of other investments are made with socio-political capital. For example, previously formed family and friendship bonds are used to persuade people to help in the lengthy argumentation *vis-à-vis* other users or authorities, to bring about shared cultivation in the disputed area, to try to involve politicians of one's own party (although rarely), etc. Indeed, in all three cases, group formation and the building of social identity (via a collective past, for example) were used as important strategies towards assertion.

All types of arguments are used. These are based opportunistically on modern law, neo-traditional law[64] or the customary law of the own ethnic group. In addition, the most powerful allies possible are sought, sometimes through bribery, while other allies are mobilised who have

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60 I refer again to the Fulbe of Gadjia who did 'improve' their territory as a deliberate asserting activity (they even used the approach to improvements that they themselves do not consider to be such, namely cutting trees, clearing bushes and develop water wells, all this only to fit in the State rules). See note 34 and Chapter 5.

61 Given the more or less traditional composition of society, with its focus on wealth and lineage, social position is not always (and perhaps almost never) the cause of substantial human capital, such as wisdom or knowledge.

62 As described in Chapter 6, one of the village representatives in the Baba Deli case risked this treatment, after he opposed the changing of the position of the pasture reserve boundaries. The sub-prefect of Mogodé accused him of rebellion.

63 In the *uncontested* Oudda territory the far side of the pasture in the north-east is the source of discords about the exact location of the boundary. Recently settled farmers in Kordraweshi (see Fig. 7.3) can produce field ownership papers signed by the *lamido* in parts of the bush, of which the cattle keepers say that it is within the pasture zone. Offspring of former clearers have sold their family fields to those newcomers and managed to get the *lamido* to sign (with the help of social capital, that is: good relationship with the lamido or his noblemen; or with the help of 'gifts').

64 The law drawn up by the Fulbe was initially enforced by the colonial powers (albeit adjusted to their own ideas) and just after independence.

the same interests and who therefore do not need to be bribed The arguments and allies are used to deny or otherwise ignore adversaries' arguments. A deliberate choice is made as regards which actor is addressed in the rights asserting process. Sometimes not even the adverse user (as in the Oudda boundary problem) is selected but rather a strategically more opportune party. This can be seen as a social-political investment in witnesses, and perhaps even allies.

Sometimes the assertion of rights is not a reaction to the entry into the new fields, but instead the invasion may be a way of asserting rights. "You see I need it now and they are, in fact, my own fields." A kind of circle reasoning is used based on the idea of "Otherwise I would not start using them." In the Diamaré bush, the Tupuri try to establish a matter-of-fact situation in their relationship with the herders and the authorities who support them[65]. Although authorities sometimes have an interest in continuing the conflict situation and do not react unambiguously to claims to land, most land-users act rationally by not continuing (or even not starting) to involve those authorities. "They only make you pay, and they never help you to secure your land", they say. In the context of the actors' strategies it is more important to persuade the adverse users.

Sometimes, the assertion of rights is not preceded by an entry into a new niche. There are actors who start their claims long before or totally separately from an invasion. In certain families or neighbourhoods (especially in the Mandara Mountains Plateau with the long history of ancestors who cleared bush areas) a certain socio-cultural pressure exists of not giving up the ancestors' fields[66]. Even without a perception of scarcity, even when you do not use those fields, you cannot offend your ancestors and deny their efforts by forgoing their lands.

In general, rights assertion is a long-term and weary exercise. Moreover, not all claims of rights to the land are successful. In all three cases, the process has not ended. Ongoing ascertaining efforts, using different methods but still without definitive results, make the actors feel more and more frustrated.

When the State has direct interests in the land, the party with the same or corresponding interests has more chance of winning its case. It can use the State's arguments and will be backed by the State (like the 'Fulbe' of Dzambou). State representatives do not adopt certain positions nor do they act according to expressed positions when they have no direct stake in (or via) the land and only try to continue the conflict to make it possible to gain more as conflict mediators (without really solving anything in the long term). Also as far as local inhabitants are concerned, the financial motive - but then via legal regulations – may be the sole reason for trying to assert land rights. Especially in the Dzambou case, certain actors try to assert rights to land only to gain direct monetary benefits from the State indemnities. Once they have succeeded they will quickly withdraw. If their approach does not work, another strategy and another goal can be chosen.

No assertion of rights to (the use of) newly entered land means that the actor accepts that his use is only temporary. He hopes to prolongate the period of use, but leaves it more or less to the circumstances outside his control. Sometimes the lack of assertion is due to uncertainty regarding the wish to prolong the period of residence. Rarer still is non-assertion because of a

[65] See also Lavigne Delville (2000: 103): "… presenting the authorities with a *fait accompli* tends to stand a good chance of success".

[66] This can also be seen in the Tupuri heartland, although not all sons react like this. In contrast, in the densely populated northern part of the Mandara Mountains (the Mafa region) high outward migration can be seen, sometimes with the total abandoning of ancestors' fields (see Van Andel (1998) and Zuiderwijk (1998)).

combination of a wish to stay and a kind of laziness or reluctance to stand up for this wish. In almost all the non-asserting cases, fear and the perception of own weakness towards the other party and towards the (unreliable) State play a role. The traditional or culturally embedded ideas that authorities should always be respected can also influence decisions about (even low-level) 'revolt'. Acceptance of State legitimacy is often exacted on the basis of fear of force (violence) by State institutions. On the other hand, misuse of power positions can lead to the circumvention of authorities by actors and subsequently to a decrease in legitimacy, as the Diamaré case shows[67].

In short, in all three cases, the small DtV as indicated by the violent events (section 8.1) is caused by the fact that the local legal system of ancestral and primordial rights does not give clear-cut rights. The traditional system is vague and the vagueness increases where different customary systems collide. Conflicts over land cannot be solved by means of the traditional rules, especially not when tension rises. Customary law in the new settings therefore requires case-to-case adjudication at a higher level. However, the motivations of adjudicators do not lead them to find solutions. They earn a kind of salary for every case, they can gain extra by outplaying the opponents, so these try to outpace each other in payoffs, and they are sometimes even party in the case.

In addition, the capacity of adjudicators is small. It is not clear to them which law system should be applied: the statutory system or the customary system. In the case of the latter, an additional decision needs to be taken as to which of the pertaining customary systems should be applied. Next to that, the legitimacy of adjudicators is not clear. Should the *lamido* or the sub-prefect have this role and in the case of additional boundary disputes, which *lamido* or sub-prefect? The evident corruption does not help to increase the legitimacy of decisions of adjudicators. Parties know that such an authority can be brided and that each decision can be changed depending on the money offered.

Thus, the small DtV is caused by uncertainty about land rights and conflict resolution patterns, even for those without direct stakes in land[68]. In all cases, more frequent land right assertions, being as such a sign of land tenure insecurity, also increase the tension level. The conflict becomes more and more manifest without there being any obvious solutions.

8.3 Entry into a new niche

1. Description of entry into a new niche.
2. a. Is it caused by land scarcity?
   b. Is it caused by other factors?
   c. Why do not all actors use the non-entry escape route?
3. What are the similarities between the three cases?

8.3.1 Description of entry into a new niche

One of the causes of the wish to ascertain the right to the land is the fact that new land is

[67] See also Lund (2002).

[68] This is a very small group. In a rural society such as North Cameroon, the vast majority of actors has land interests.

entered (see box 2 of the VoE diagram). The investment in the entry makes people try to hold on to the new niche and not lose those lands again.

Case 1: Baba Deli

After decades of using only nearby fields, Dzambou inhabitants sought the empty bush of the unofficial Baba Deli pasture zone in order to cultivate. Neither they, nor their fathers and sometimes not even their grandfathers, had ever used this area apart from when they cleared the dense forest that existed there two generations ago, after which they delineated their 'own' territory with stone lines on the soil or stone markers on tree branches.

At first only a very small proportion of the inhabitants started to use the fields of the ancestors in the pasture reserve. Some only use the fields of other traditional owners (via renting or borrowing) that are not owned by their own (extended) family. A high proportion of those who entered are young men. The number of new users increased slowly, but up until the time of the research the surface of agricultural fields in the originally empty bush zone did not exceed a third of the whole.

Case 2: Kolara-Kobo

In the case of the Diamaré, the entry into a new area consisted of both field-clearing and settlement. People came from the nearby region or from the Tupuri heartland further away. Most of them started the new fields after they themselves, friends or family members had first visited the area to consider the possibilities. Sometimes, in the first years of settlement, risks were spread by sending a son or a wife while the rest of the family continued farming in the region of origin. In other instances, a pattern emerged of moving closer every couple of years, from far away to a surrounding village first and then to the actual bush. Most of the time it took several years at least from the first time people had inspected the bush until the actual settlement. The step itself was considered over and over again. Costs, benefits and risks were calculated. All settlements were preceded by the clearing of areas for fields in the dry season before the year of settlement. The average age of settlement household heads was significantly lower than that of villages of origin.

Case 3: Kubadje-Jiksa

The villagers of Oudda only resorted to the Jiksa-Kubadje zone when they (or their husbands) had ancestral claims there. Over the last 10 years, the use of Jiksa fields increased when a growing number of farmers considered that they had used their other fields long enough. Young men in particular started to clear the bush of Jiksa and began fields there.

Some of the inhabitants of Oudda started new fields in other areas of the village that (until the end of the research) were not contested by others. For these new users these areas contained the customary rights of: "cleared by one's ancestor". Because Jiksa users consider the Jiksa area to be cleared by ancestors too, they do not see any difference with the position of fellow villagers who are able to start using old fallow fields without any interference[69]. It may

[69] As stated earlier, in Chapter 7, some farmers start to clear anew fields of ancestors in Oudda areas that have been allocated as pasture by the former *lamido.* These actions are considered illegal by all parties involved. The offspring of those ancestors do not have rights there and they do not claim rights either, apart from cultivating as long as nobody stops them. The moment somebody complains to the *lamido*, they leave and they never try to get reimbursement for cattle damage to crops.

be the case that they clear another field, but the field as such is not new. In their view no change of boundaries from their region of origin has taken place.

8.3.2 Land scarcity or other causing factors? Why do not all actors choose non-entry?

The (perception of) scarcity of fertile land or other causes leads to new land being entered. But why do people not choose for strategies other than entering. Is the entry a Thünian action into the outer 'frontier' zone, because the pressure on the inner zone increases due to the nearness and growth of a market centre? Why do inhabitants not choose for the Boserupian intensification trajectory?

Case 1: Baba Deli

Some of those that entered Baba Deli pasture did so because they considered the time ripe to start using the now fertile fields of their ancestors. All users said they did so because of a lack of fertile fields elsewhere. However, the data in Table 6.4.1 and 6.4.2 (chapter 6) show that this is only true for 65 % of them. Thirteen household heads out of twenty-three had indeed no good fields and two households with good fields outside the pasture had a low total surface area at their disposal. For the other 35 % of users, an anticipation of a future lack for the actor himself or his offspring might be a reason to enter the pasture reserve.

Seeing the activities of the authorities to set up more and more pasture forest reserves on the Mandara Mountain plateaux, some people started using fields in the pasture zone to show to the State representatives that the land was somebody's property. This was probably[70] done with the aim of persuading the State to choose another area and so not to become the victim of a *fait-accompli* when in the future these fields appear to be necessary for the family, or with the aim to become candidate for the law-based compensation fee.

For several families, and especially their younger male members, the reason to invade the new area was based on the idea that it was family property. They saw no reason why they should not start using those fields. Especially when they could see a decline in the number of fields per family member in the rest of the village together with the fertility of some of the fields that had been used for a long time, they thought it normal to clear fields which had been left fallow for a long time and which had once been created by their ancestors. The idea of investing in other fields instead was ridiculous and would mean spending money on rent without long-term gains regarding the field quality or tenure.

Although there are still plenty of fallow fields in the village, the land security picture in Dzambou as a whole is not promising (see Table 6.3.5). For individual farmers the situation is even worse because there are few options open to them to leave. Mostly, the younger, more educated men with greater ambitions are aware of the grim future ahead of them. In response to this, they not only try to invest in all sorts of capitals apart from the land of their ancestors, but include those fields into their considerations and actions as well. They have learned of other options, but also of the rising monetary value of land. In addition they, like the other inhabitants, do not see any need to leave an area solely for pasture. They perceive a future lack of arable land but no future lack of pasture.

[70] Some of the users who started after the State activities had begun mentioned this motive while sometimes it was suggested by others (non-users).

Case 2: Kolara-Kobo

In the Diamaré, the entry of Tupuri is certainly based on a lack of (fertile) land in the regions of origin and an insecure situation in general (see Table 5.3.11). There it is very difficult to implement agricultural improvements. People try to search for other modes of existence but that is not easy either. New users are poorer both in economic and social terms than the average people in their villages of origin. Investment with and in capital other than natural is almost impossible. If they want to have a prosperous life and at least an equal number of possibilities for their offspring, they have to go to new areas, they say. This means an investment in (the enlargement of) natural capital, but not in the area of origin and not in the quality of natural capital already possessed. Although the Diamaré entails a risk in the sphere of precipitation shortages, the area is not totally new and it is a very extended one. In addition, those new users who own ploughs wanted to use them and therefore had to quit their region of origin because there the available surface is far too small to make efficient use of ploughs.

In the social realm, new users did not occupy very high positions in their villages of origin. Ambitious young men may have chosen for relocation because in new settlements the hierarchy has to be rebuilt and they may end up at a higher position[71]. Sometimes, although not in the exact area under study, Tupuri migrants have left their village of origin because of social problems there[72]. In a new settlement, personal histories are not known or do not count.

In the Tupuri heartland, village chiefs complain about the out-flux of people, although the majority still remain. Many of those who stay explain that a real Tupuri does not leave the area of his ancestors alone. Some have direct obligations *vis-à-vis* an old father or uncle. Yet, more negative attitudes also make people stay, such as a lack of the praised 'Tupuri-braveness' to go out in the wild and perform heroic deeds. These people remain fatalistically in the over-crowded heartland villages, waiting for bad things to happen[73]. Sometimes these household heads do not even try to use all the options offered by the direct surroundings. Yet, of both remaining categories, but especially of those who stayed out of cultural and social motives, several people try to make the best of it by investing in new social arrangements and mutual cash facilities[74].

Case 3: Kubadje-Jiksa

The same applies to Oudda as in Dzambou. Here again the total land surface area available is sufficient for all inhabitants, but the general livelihood security situation is not that positive (see Table 7.3.7). Investment in long-term family property and thus security is the norm. Hiring does not generate any long-term gain, other free areas still remain insecure and claiming ancestral land means re-securing the old claim. In the African system of fluid property rights (Berry 1993; Juul and Lund 2002) investing in a strong position for negotiations is a necessary activity (Peters 2002). Especially strong (young and healthy) and future-oriented people (the young and ambitious) will therefore choose the strategy of assertion with regard to

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71 Each new settlement has to have at least a *djaoro* and his first counsellor, sometimes also a *djaksiri* (see chapter 5). First arrivals are important.

72 Van der Ploeg (2001).

73 Differences in personal characteristics regarding explorative and brave behaviour already existed in former generations. Whether or not this indolent and/or cowardly behaviour has increased over the years is not clear. Even when the percentage of persons with such a character remains the same, the increase of the population means that the absolute number of them increases.

74 For details thereof: see chapter 5.

ancestral fields by using them. Even a short-term cost-benefit analysis can make people choose to clear their ancestral fields. Why spend money on hiring other fields when your own are only a couple of hours walk away?

Although Oudda does not show specifically that the young, educated men are the ones that enter the pasture area, like in Dzambou, the Jiksa users certainly have a more open mind than their fellow villagers towards 'modernities'. This is shown for example by their willingness to use school for their offspring as an option to improve living conditions. Because of this more modern world view, the economisation of society also plays a role in safeguarding ancestors' fields.

In Oudda the opportunistic move towards buy-out prices from the State does not play a role. Here the inciting position of the *lamido* of Guili is important, at least for the moment of entry. Moreover, the collective claim to the area and thus the support of other inhabitants and the village chief makes farmers start their new fields at this special moment.

Only a minority entered the pasture reserves both in Oudda and in Dzambou. Not even all owners of land (according to customary rights) did so, although some of them did mention a shortage of fertile land. Some of the wives of Jiksa field owners refrained from invasion out of fear and a calculation of net loss. Some actors considered the pasture fields to be too far away. In Oudda some people even mentioned their unwillingness (out of empathy and out of fear) to disturb the settlement of Kubadje with all the negative impacts thereof.

Like those who asserted their rights, most other inhabitants had some resources in several domains of capitals and tried to capitalise on them. Almost everyone invested in the (quality of) natural capital. In general everybody tried to invest in ways of countering the decline in the fertility of their fields other than just extending the quantity of natural capital. In addition, both new users and non-invaders did not see the use of the new fields as a totally different method, but just as a normal capitalisation of (dormant) natural capital they had already possessed for a long time.

8.3.3 Similarities between the three cases

Everywhere the majority of actors wanted to improve their economic position and their general level of food security. Mostly they did not resort to the use of new land in such faraway, unused areas. Not all of those who did changed their place of residence as well. In the Mandara Mountain plateaux farmers did not change the location of the compounds and travelled backwards and forwards to the new fields. Although this was a long journey, it was possible to reach the agricultural area within a short enough time to make cultivation possible. In the Diamaré, distances were much greater[75] so the decision also had to take into account the setbacks of an actual move.

For all actors, the entry into the pasture area was a move to more outlying zones compared to where they had been farming before. However, Von Thünen's theory[76] does not apply here[77]. They were not driven from their former fields by richer actors who started to be interested because of

[75] Even when the in-between step of temporary settlement in a village adjacent to the bush was made, the distance to the new bush fields was considered to be too far, although it was theoretically possible to start off very early every day to reach those fields for cultivating. However, in those temporary villages the migrant had no or only weak social ties.

[76] See chapter 2.

[77] Also Njomaha (2004) concludes that Von Thünen's theory is only applicable to two out of twenty research sites in the Far North province of Cameroon.

the increasing value of land due to nearness (or better accessibility) of a (growing) market centre. Those who stayed behind were not motivated by the possibility to make more money out of their land. On the contrary, land had not really been commoditised. Had the original zones had better access to markets then that could have served as an escape route, giving possibilities for intensification. Yet, the Boserupian route[78] was not possible because of a lack of infrastructure for both the supply of input and off-take of output. Moreover, individual investments did not offer a way out since most actors did not even have enough money to hire fields.

Furthermore, the Boserup route is not applicable because that theory applies within a limited area[79] in which one group has to feed its members. In the cases studied, the boundaries of the areas of confined groups had not yet been reached. Like Boserup, they do not reckon with the occupation of the same area by other groups, who also only focus on their own group interests. So, it seems as if in each case two groups consider the pressure on their territory not yet so high that it will force them towards intensification. Additionally, Boserup's agricultural transition takes time[80]. For the case studies, the change into the high-pressure situation within the bounded area will come about too abruptly. "… external changes may sweep rapidly over a group, giving them insufficient time to adjust their internal structures to avoid the sub-optimal outcomes." (Ostrom 1990:21; see chapter 2 of this thesis). Suddenly, when they start using seemingly empty bush, farmers are confronted with other users and thus pressure.

Although theory suggests that in times of increasing pressure on resources either transition or involution are the possible answers, the dismissal of the Boserup route in the studied cases did not lead inevitably to the downward spiral of Malthus. Because at least one of the parties still had the opportunity to use new surface in the early phases, Malthus' negative scenario does not apply here. People are not desperately doing more and more of the same with declining results, instead they are doing the same in an expanding territory.

Indeed, those who made the new clearings defined the land as either theirs (Mandara plateaux) or 'free' (Diamaré[81]). "The area was empty": 'empty' when the ancestors started clearing or 'empty' when the present settlers started to clear. To define this emptiness, the new users used arguments based in their own (ethnic) customary rules and, when this seemed convenient, in State laws. The (different) traditional rules of other users were ignored and others' interests denied.

None of the studied new users chose the most fertile land as the spot to clear or settle. In the two Mandara cases the choice was limited by the location of ancestors' activities. If the great-grandfather had cleared a strip of land on a steep hill, on a rocky place or where the basic soil composition was worse than the general composition, the new user had to make do with it. In the Kolara-Kobo bush settlers chose areas adjacent to vast areas of *karal* fields and preferably on fertile vertisols, but not necessarily on former camp sites, where the year-long accumulation of manure had made the soil very rich[82]. Tupuri villages extend over larger areas than nomadic camps, so often such camp sites, lying next to a river, were not appropriate

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78 For a brief explanation of the theory of Boserup (1965): see chapter 2.

79 This is, between other things, implicated by measurement of percentages of "total area" (Boserup 1965: 30) that can be used under a certain type of agriculture.

80 See, e.g., Tiffen *et al* (1994).

81 Although, even here a kind of historical communal ownership was voiced.

82 The cases of Van der Ploeg (2001), Wassouni (pers. comm) and Moritz (forthcoming), referred to in section 8.2.1, case 2, relate to settlement on camp sites and therefore on reducing camp possibilities for nomads.

because half of the village would risk being inundated during the rainy season. The first settlers counted on future growth of their settlement and actively tried to persuade others to join them. Also the other parties did not seek the most fertile lands *per se*. In all three cases, especially the access to cattle routes was problematic because the herders wanted to herd their cattle without disturbances. Fields and settlements that blocked the road resulted in crop damage and therefore conflicts. Only occasionally was a camp site involved. But then again the agitation of the nomads did not concern the site's extremely rich soil, but rather its strategic position and the age-old habit of using it.

In all the three cases the actual new users are younger than the average age in their region (of origin), because the heavy work of clearing requires extra health and strenght. Why these young men do not use their extra capabilities to reach other goals is not totally clear. They cope with the long distances to the fields, to the outside world and to water locations, quarrels with cattle keepers, an increased risk of losing livestock, etc. Those who resettle also lose general options in the health and education domain. The investment in a new area requires a special mindset based partly on biological-psychological properties and partly on the interpretation of reality together with that of own capacities. The interpretation of the actual and future situation of land scarcity is no different from that of other villagers who do not start new fields in contested areas. However, the view of circumstances and influences, as well as which strategy will lead to success, is different. Together, all these factors mean that their cost-benefit analysis favours invasion. Especially for poorer people, short-term considerations only relate to the combination of reasonably nearby ancestral fields, there being no other free areas available and those fields that are available being for hire. Hiring, however, will not generate any returns in the longer term. Other free areas will remain unavailable. Thus, especially for future oriented people (= the young and ambitious), who have an eye for the long term, it is time to re-assert the ancestral fields. It helps a lot if those people are strong enough to clear large parts of the bush and to walk long distances or even, perhaps, to resist others. That means that in general they have to be young and healthy.

On the Mandara Mountains plateaux, those who choose to use the new fields also try to invest in other options, such as the education of children. They may even combine the two strategies because they see that on a yet longer time scale (a perspective generally only accessible for the rich, the elite), the security of those ancestral fields cannot be guaranteed versus the State, that claims more and more reserves.

Although, on the one hand, actors tried to use their new fields without disturbing others and without arousing authorities, on the other hand they mostly had to secure support from the authorities, at least to stress one's case in contrast with that of the adverse users. Indeed, several times, the invasion of the new niche was used as a (hopefully) "*fait accompli*" towards the authorities (and the other users).

8.4 Land scarcity

1 Description of land scarcity.
2 a. Is it caused by negative impacts on land, by access rules or by both?
  b. Is it caused by other factors?

c. What are the basic factors causing the negative impacts on the land?

3 What are the similarities between the three cases?

8.4.1 Description of land scarcity

Going backwards in the VoE diagram, one of the goals related to using a new piece of land was to counter the rising shortage of fertile land, with this safeguarding the long-term assertion of food and livelihood security (for the family). The land shortage can be a real threat or only 'real' in the perception of the actors.

Case 1, Baba Deli and Case 3, Kubadje-Jiksa

Unlike the situation in more densely populated parts of the Mandara Mountains, in the Mandara Mountain Plateaux, neither Bana nor Kapsiki villages as a whole in the areas studied suffer from land shortage. In terms of the VoE diagram (Box 1): they do not suffer from a low personal Environmental Use Space with regard to agriculture (see the second sections of chapter 6 and 7). Several individuals, however, complain about a lack of fields and some, indeed, do not dispose of enough surface area with sufficiently fertile soils to make a living. In the case of Oudda and Dzambou the percentages of people who entered the new zone without (access to) enough proper fields elsewhere were 56 and 65 percent respectively (see chapter 7.4.1 and 6.4.1). At the same time, other subsistence possibilities were also absent.

Added to this is the fact that in the longer run, and given the increase in the population, the number of fields outside the pasture area will not be sufficient to continue the tradition of long-term fallows. To maintain this extensive way of agriculture a pasture area will also be necessary. As has been stated, this situation of 'not enough fertile fields' has already been reached by some actors.

Case 2: Kolara-Kobo

For the new users of the Diamaré the situation in the places of origin is even worse. In general the available surface for villages of origin is just sufficient for all inhabitants together. Kolara seems a bit better situated with its mean field surface per person of 0.36 ha, but it is still not very much. Here again the motives of the settlers were almost always expressed in terms of 'searching for land' and 'curbing the hunger of the family'. Before the move, they had access to less than a sufficient field surface area (0.16 ha per capita) and more than half of them explained that their fields were not fertile enough.

As shown in chapter 2, the lack of Environmental Use Space for an actor is made up of a combination of access (and use) possibilities with regard to land and negative impacts on the land caused by population pressure, affluence of this population and available technology to counter (or that increases) the negative effects of the other two factors. The size and type of impact of these last three factors is determined by the vulnerability of the physical basis of the land. All factors can be and are influenced by institutional rules and regulations at various levels.

8.4.2 The factors causing personal (fertile) land shortage

Case 1: Baba Deli and Case 3: Kubadje-Jiksa

Both in Dzambou and in Oudda land is divided very unequally over the different households.

For example, in Oudda, walking from the compound of one new user to that of another means crossing vast stretches of fallow land. However, these fields cannot be used by the families of Jiksa new users, as they are the property of others. It is also more and more the case that those others ask for money if somebody else wants to use their land.

Although the general fertility of the mountain plateau is not overwhelmingly good, and vulnerability for erosion and drought is high, at the moment the situation is satisfactory, especially when the fields get the chance of recovery after several years of use. Looking at the whole area, the total population density is not high with the average field surface area per person being more than that which is considered sufficient in this climate zone[83]. Technology is not a factor of great importance here. Ploughing may disturb the soil but, on the other hand, it can improve productivity. The cultivation of groundnuts as a cash crop may improve soil quality because it is nitrogen binding.

Thus, it is not the scarcity of land in general that matters, but *the scarcity thereof for certain actors and specifically for those individuals that entered new areas*. It is the unequal distribution that obliges farmers to resort to the bush area of Jiksa or Baba Deli. Re-partition among the families is unthinkable. Some Dzambou inhabitants suggest that they would accept the exclusion of the Fulbe quarter from the pasture reserve if the richer field owners there were to give away some of their other fields (those in the direction of Sir, for example[84]) or some of their yields.

Case 2: Kolara-Kobo

Unequal distribution of land plays a role in the Diamaré case as well. Moreover, the heartland is suffering from a general land shortage which is affecting (almost) everybody. In some areas this is less pressing because the inhabitants have already chosen to change their way of life more thoroughly. For example in Sirlawé the pressure is less because of a higher out-migration of highly educated young men to non-agricultural jobs. However, this is not always possible and, according to interviews, it is taking place less frequently at the moment than in the past. According to the Tupuri custom, not all sons inherit land. So, in some families, individuals do not have access to any fields because they have too many brothers. Nevertheless, the inheritance is mostly divided among a number of sons and the total surface area per owning son diminishes over the generations.

Thus, some families have less land surface area than others. In addition, some families consist of more (male) individuals than others. These two negative factors can also exist within one family at the same time. In such cases the individual scarcity can reach high levels. The institutions that regulate the property rules are based in custom and history, but change over time. Although, in the past, the Kapsiki did not live in a system of private property as far as land was concerned (Van Beek 1978, 1987), it appears that they registered anyhow the activities of their (great-)grandfathers and the resulting cleared areas. In this way they ascertained their family rights to land. In the event of conflicts over land this information was indispensable. Even a generation ago, this was leading more and more to the active claiming of title deeds. The use

[83] See Dietz *et al* (2001) and the two chapters of the cases (chapters 6 and 7).

[84] This would not help all families in need of fields, because only a minority of inhabitants of the Fulbe neighbourhood had access to other fields. The fact that most do not, is one of the reasons why they cannot move.

of another family's land became more difficult. All the inhabitants of a certain neighbourhood, and sometimes inhabitants outside that neighbourhood, knew where the fields of their own family and that of others were situated. Whether or not the family rights led to more individual private property rights depended on the rules within the extended family. No village authority was able to interfere in the process. Expropriation of these rights could only take place by way of allocation by the legitimate local (regional) authorities and only for communal benefit. If the legitimacy of that authority is accepted, its decisions become law.

The traditional rule of first-comer and first-clearer also applies to the Tupuri. The ancestor who cleared the most also provided his offspring with the most extended arable surface area. The very first arrival had some special rights to allocate certain areas as 'not to be cleared' (holy bushes, etc.), but normally first-comers rushed on competitively in order to clear as much as possible[85]. In several settlements in the Diamaré the *djaoros* (who were the very first to arrive) decided to put a limit on the maximum clearing of certain soils. For example, recognising the limitations of transplant-sorghum fields in the bush, new families could only clear a certain surface thereof, so as to guarantee future settlers some hectares as well.

Apart from the more biological and chance-based[86] factor of the number of offspring of such first-clearers, the dedication and bravery of the ancestor as regards entry into possibly dangerous areas, as well as the hard clearing work as such, determined the actual property of (individuals within) families. In principle, thus, the unequal distribution of fields is not due to original power disparities or the appropriation of land by elites[87]. First-comers became the elite and (mostly) big land owners at the same time. Until recently, in the areas studied the State did not have anything to do with the allocation of lands to different individuals of the actor groups currently involved. In the Diamaré areas formerly situated in the Pilot Project zone (most of the study area) both the groups studied were excluded during the project period. Only local cattle herders had permission to use the area and neither agriculturalists nor nomadic pastoralists had rights to the land. Now, after the opening up of the Pilot project area, local cattle herders do not have any more access rights than other cattle keepers.

As has been stated, on the mountain plateaux the population density is not yet a cause for concern. However, certain families have so many members that this has limited the access possibilities for several individuals. There are no effective institutions for diminishing the high population growth. The State Family Planning policies have not resulted in any decrease of births in the studied regions[88].

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[85] Interviews May-June 2001 and January 2004 with Tupuri respondents in the Heartland and in Kolara-Kobo.

[86] This refers to factors in the physiology of the parent couple and the risk and factual occurance of diseases and death. In fact the social position and wealth of a house father also plays a role. For example, greater wealth means the possibility of more wives, and therefore more children as well.

[87] The family of the village chief (the one who now governs the agglomerate of the three most eastern neighbourhoods) in Oudda is the owner of extended areas of fields, because their forefather was already chief here and in the past village inhabitants were obliged to help for several days (or weeks) per year with agricultural work on the chief's fields. Part of this work consisted of the clearing of new areas. Actually this family loans out fields to everybody who wants to use them. These are mostly villagers without any fields of their own. The chief himself acquires most of his income from trade in cloth.

[88] Successful measures for birth control which are accepted worldwide, like more education for girls, have not reached the mountain plateau. In the Tupuri areas this has been implemented slightly more effectively. Lots of young Tupuri women explain they want fewer children (that is no more than 5 or 6 rather than an infinite amount).

Although people may wish for a more affluent life, reality makes them only try to maintain their usual level. In years of abundant rain, some people indeed dare to dream about a better life but often such dreams are dispelled a year later when the rainfall is again insufficient. Except for a technology-related wish for more surface area, based on the use of ploughs, the desire to maintain or increase one's wealth does not cause the personal lack of Environmental Use Space.

The use of ploughs is an ambiguous factor. On the one hand it is the reason why people want more surface area in order to make effective use of the equipment. On the other hand, it makes it possible to work more efficiently and effectively on the fields and, thus, generate a higher yield. Looking at it from yet another angle, ploughs may raise yields at first but in the longer run they may cause a more rapid exhaustion of the soils (if no measures are taken). Other new technology, either with positive or negative effects, is mostly not at the disposal of the actors.

8.4.3 Similarities between the three cases

In all three cases several individual actors suffer from a lack of fertile land because of the division of fields over the families and the number of farming people per family. Some families, even when they initially had access to extended areas, have since become very large and are having to share the area between too many individuals. Land inequality was not caused by elite land capturing (see Homer-Dixon 1999). However, in the Diamaré, the pressure on the land is also increasing because of an increase in use by rich urban-based cattle owners.

The higher pressure on the land for certain families, caused by the access rules of the different ethnic groups in all three areas, may be combined with the vulnerability of the physical basis for both erosion and quick fertility loss, especially in times of drought. This enhances the diminishing actual access of individuals to enough and sufficiently fertile fields.

General (modern) technology designed to increase the fertility of these small surfaces is not accessible for most of the inhabitants of the villages studied, let alone for those that resorted to entry into new niches.

In some of the neighbourhoods, some (groups of) actors try to counter food-insecurities by way of social, collective initiatives. When broadened to include not only stocking systems of money and food, and when implemented in whole villages and in the most effective way possible, these initiatives may, on the one hand, lead to better and more equal access rules, and therefore more equal security in relation to food. On the other hand, it may result in improved management of the land in general[89]. Such new institutions can be seen as a feedback-loop from Box 1 of the VoE diagram to the 'Box 0' zone before it.

The use of other options to counter the lack of Environmental Use Space and a subsequent lack of food are mostly blocked for all those that choose to enter a new niche.

Yet, in all three cases, the overall scarcity of land was at an intermediate level. Nevertheless, fallow land could be found and options to start using 'new' land (although partly in use by others) were available. None of the three cases suffered from a total occupation of the land, as is the case in other parts of Far North Province[90].

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[89] For example, initiatives to set up or participate in rural information circles on how to improve agricultural practices.

[90] For example, the area of the Mafa in the northern Mandara Mountains (see Zuiderwijk (1998) or Van Andel (1998)).

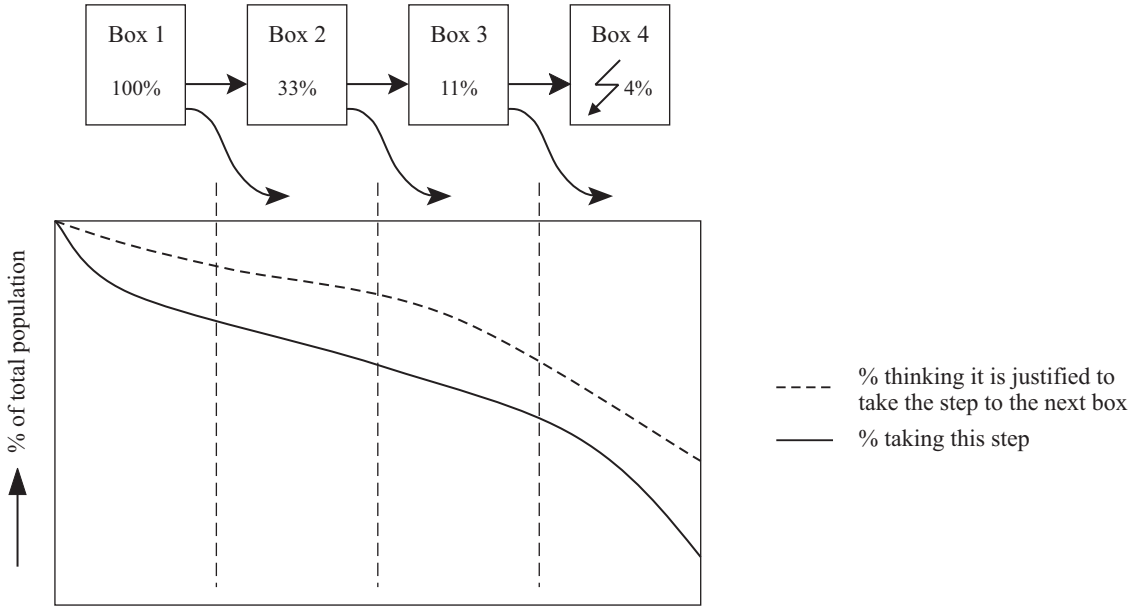
8.5 General conclusions

8.5.1 A pattern or only complexities?

If the different steps in the VoE diagram are examined, it is clear that different actors use different tactics each time to safeguard the goals formulated in an 'event' box. On each occasion, only a minority follow the horizontal arrow towards the next box (see Fig. 8.6). Moreover, the motivations for using an action that is expressed in a box turn out each time to have other sources (as well) - at least for some of the actors - than the goal formulated in the former box. For example, the assertion of rights to land is not always an effect of the entry into a new niche, let alone of a diminishing of Environmental Use Space. The assertion of rights to land is directly related to a more general complex of insecurities, that is a lack of other options. Sometimes people who stay where they are nevertheless try to assert their rights to new lands. Often, the perception of land scarcity leads to actions other than the invasion of new lands and the assertion of the rights involved.

Nonetheless, as can be seen in the three cases, a causal link between violent outbreaks and environmental scarcity does exist. However, this link is not always apparent and does not apply to everybody. In the areas studied it is a minority pathway. For those choosing violence, the scarcity is sometimes seen as an actual threat. Sometimes it is seen as only a potential threat. Then, actors want to be sure that such a threat will not become real for them and their families.

Figure 8.6 *Participation in Violence Profile (PiV)*
(the percentages are arbitrarily, but reasonably, chosen to illustrate that the Cascade to Violence is a minority route for each Box)

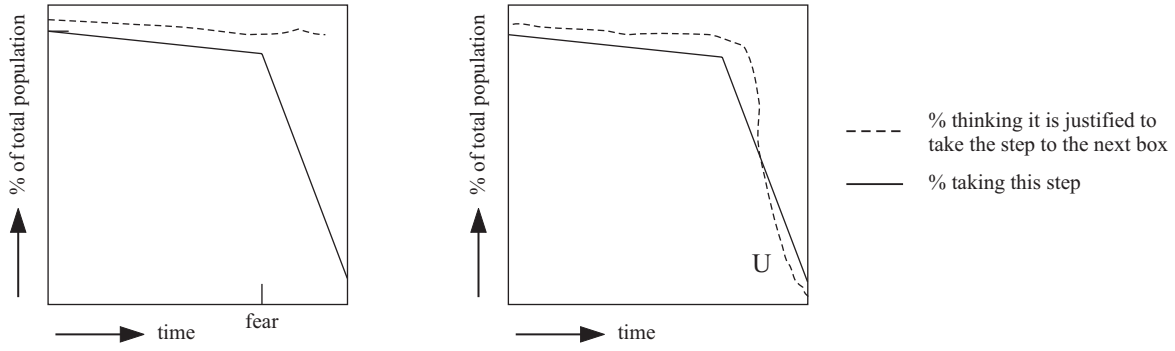


Local history has had a major influence on the perception of the legitimacy of each step of the VoE diagram and the activities necessary in order to respond to the perceived tendencies. At the same time, the actual situations and cultural ways of viewing the world (together with manipulation of perceptions) also influence people's perception of history. Whether or not an

actor will take a step also depends on the backing of 'his' narrative by the rest of the community (and how big or how influential that group is). This can also be manipulated or, more positively, managed.

When earlier steps in the Cascade are deemed legitimate, and are indeed taken, the step to violence may be engendered by a feeling of hopelessness and 'standing alone' with one's own interests or those of the small group to which one belongs, in opposition to the other party. In that case the DtV described in section 8.1.5. is small. Here again, legitimacy perception and the justification of violence are important parameters. Except in pure one-off emotional outbursts, resorting to violence can only be done when the actors feel they are supported somewhat by co-members of the same group or village. These may be, or perhaps preferably are, people without direct interests in the cause itself. This moral support is, among other things, what is sought in the earlier phases of the conflict. What people need is not so much others to fight with them but people who will support their conflict (this is, for example, one of the important roles that women have in wars). Within each society the percentage of people actively involved is always (at least slightly) lower than of those who consider the action legitimate. Within a society, those members of the same group that support the action are considered - by the performers of that action - to be of the same sub-group, distinguishing themselves from the rest of society. While manipulating such considerations, clever leaders may organise the back-up by others on the waves of a small DtV, especially when the culture involved already values the use of violence and when it contains devices (methods) to imply and incite others[91].

Figure 8.7 PiV under the influence of emotions or norms



a: Ratio-emotionally blocked in case of fear b: normatively blocked in case of changing norms

However, a converse effect of culture may also be seen. Not all factors are aggravating. Two different phenomena, for example, inhibit the actual use of violence. One is based on morality and the other based on fear. Both are culture and character dependent, interplaying between the autonomy and the interpretative frames categories of De Groot and Kamminga (1995)[92] and strongly influenced by the manipulations of leaders. Moral notions set the threshold for 'violence is justified', 'we want violence', and thus for actual violence (see Fig. 8.7b). Moral

[91] Examples are songs with provocative texts, stories about heroes whose examples have to be followed (although, again, these may be invented or made up by leaders, even over longer time spans (see Chilver 1996)), or stirring drums.

[92] See chapter 2.

notions regarding violence can also change quickly when people are confronted with actual violence and the shock of casualties and losses, as can be seen by the Kapsiki who baulk from violence since the violent days of their ancestors. In such an event it is possible that the justification of the violence is lower than the percentage of people who actually use it (Fig. 8.7b, line U). In general, justification by a big enough group is important to start or continue violence. Of course the feeling of 'it is justified' is influenced by the strength of frustration and *vice versa*. On the other hand, a general feeling of 'violence is legitimate' can still result in non-violence when participants do not dare to fight (see Fig. 8.7a). Although not explicitly evident, in all three cases this seems to play a role with regard to intervention from the State and, as far as some actors are concerned, with regard to the strength and mobilisation speed of the adverse party.

In general, it is possible to say that a lack of legitimate conflict resolution mechanisms and the feeling of actors that there is too much arbitrariness[93] and unfairness in a context of over-all rising insecurities[94], may engender a small DtV. This then, can combine with personal insufficiencies regarding livelihood[95] to make individuals resort to violence. Such a shortage of conflict resolution mechanisms also causes a rising neglect of other people's interests[96], which makes the step to contending and violence smaller. The legal insecurity is partly due to the combination of an unclear and outdated customary law system, sometimes even opposed by another hostile customary law system (as in the Diamaré-case), and an evenly unclear and ambiguous formal law system[97]. This mix changes the much praised African fluidity[98] into a system of manipulation by the powerful and leaves the poorer endowed with less or almost no other options than the one of despair.

In the cases studied women are not opposed to their own spouses or other men of their own group, nor are only they opposed to other user groups, as reported for example in North-West Province by Chilver (1989)[99]. They and 'their' men suffer equally from the growing competition over land. In addition, with the production of sorghum by man and wife together, subsistence production is not solely the women's responsibility. As is the case almost everywhere in Cameroon, women do not have an official say in 'political' matters. All this, together with a lack of organisation[100], causes women in all three cases to wait for action of the men. They do, however, have influence on the general tension level of their societies by way of speaking

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93 The much noticed ambiguity of tenure systems in Africa (Berry 1993, Bruce 1988), and the fact that all arrangements are always negotiable (Juul and Lund 2002) regularly leads to situations of excessive uncertainty. Especially the weak are frequently the victim of the fact that powerful actors set the conditions and outcome of such negotiations.

94 Not only in the natural resource domain.

95 In the rural areas of Cameroon (and in lots of other places) this is directly related to access to land.

96 See, e.g., Broome (1993).

97 Blaming the pluralistic legal system as such ignores the fact that with clear definitions and with clearly defined boundaries and competences (all deemed legitimate by the actors involved) different legal systems may be exercised perfectly well on top of and next to each other.

98 In situations of power equality or where power holders can be checked by the rest of the group (because the system may be fluid, but not totally unclear), fluidity may lead to lots of small skirmishes, but these are easily manageable.

99 Chilver (1989) describes several women's uprisings in NW Province from the end of the 1950s onwards (violent and non-violent) when their possibilities to use land and produce food crops were hampered.

100 In NW Province women were organised into 'action groups' both based on Bamenda customs and on the help of elite women from the women's wing of the ruling political party (Chilver 1989).

together and with their husbands, brothers and fathers about experienced problems[101], and by enticing their men folk into forceful action.

The use of violence can be a strategic act to gain access to important resources (being material or immaterial) or it can be an emotional outburst of frustration. As Moore (1978: 50) already said, "… people arrange their immediate situations by means of processes of situational adjustment". This means that not all actions are aimed at the regularisation of social reality. Many times actors "act in irregular ways" (Leach *et al* 1997: 50).

The violent events in the cases studied are all highly triggered by an emotional response to an acute threat. At the same time they give rise to future-oriented rational deliberations about whether or not to use the violence again. Repeated incidents thereby gain in rationality and strategic content. The learning effect increases. The actors have learned that violence, other tactics, or even a combination of the two may or may not be successful and they have also established which type of violence pays off or not. A series of incidents, together with the in-between periods of other types of actions, can in and by itself cause peace or war. In such cases of longer-enduring conflicts structures of justification (narratives) and structures of strategy in a more material sense (e.g. allies) develop. In the terms of section 8.1.4: such deliberate strategies influence the position of the tension line and thus the width of the DtV. Of course, the arguments used in the narratives are also part of the strategies[102].

Not all the actors present choose either the route towards violence or that towards the peaceful assertion of rights. There are differences between actors because their perceptions of the problem are different, their positions in the social fabric are different and they choose to invest in other capitals - again with the help of other capitals - partly because the endowments with capitals is different per person and partly because they regard different capitals important than their co-actors do. It is worth mentioning the example of the (interpretation of the) relationship with the State and the way the State-role is perceived to have an effect on both the land tenure issue as well as the general position of the actor[103]. Of course the factual activities of the State (or its representatives) play an important role in those perceptions. If the relative strength of 'fuelling' factors for an actor (or for a group of actors) reaches a certain threshold, acute threats can trigger violence.

In addition, there are innumerable factors that inhibit the unwinding of the cascade of the VoE diagram. It seems as if actors prefer the non-violent route and that only the 'circumstances' make them choose to follow the cascade of violence. Although they have to take account of the ever-present risk of counteractions by jealous fellow villagers who are envious of success (an ever-returning issue in discussions with farmers in all three case studies)[104], most

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[101] For example, the woman of Oudda who was threatened with a stick by one of the Fulbe cattle keepers after crop damage by the cattle of *Elhadji* Ngoura told her story to anybody who would listen and this gave rise to highly indignant reactions in all the 'outer' neighbourhoods of Oudda (see Chapter 7).

[102] The more powerful people are, the easier they can manipulate the narratives, and the easier they can use the ambiguities in the land rights system to their own benefit (see, e.g., Peters 2002).

[103] Both the relationship with and the role of the State can deliberately be invested in long before the actual fight(s), dependent (again) on possibilities, long-term views and position of the actor. This is what the inhabitants of the Fulbe hamlet in Baba Deli seem to be doing.

[104] Platteau (1996: 62-63) also mentions the lack of agricultural investment possibilities in Sub-Saharan Africa due to, first and foremost, the shortage of economic and technological infrastructure and, second, even if all these necessities are present, "people are discouraged from improving their lands because of jealousy on the part of the chief and other villagers."

of the time, and if enough other economic possibilities are available, people do not try to start fields in new niches. A rational calculation then tells them that the effort of bush clearing and the risks of expulsion by current users or the State, together with some other setbacks (that are always present), make the costs of entry too high compared to the benefits.

However, social and cultural rationality may lead actors away from strict economic deliberations. More ethical considerations, like the obligation *vis-à-vis* ancestors (and their fields) and the principle that "land ought to belong to the sons of the village" (Platteau 1996: 46), often play a role in the claiming of land. In the three cases this motivation - that is also connected to the role of land as a device of meaning and a source of identity formation - certainly mixes with the economic drives to ascertain land. Nevertheless, although the struggle for land is indeed connected to feelings of belonging both to the land itself and to the group that is thought to have the right to use it, the cases show that those feelings do not *per se* connect to ethnicity. For example, geographical positioning or the basic way of life may be a more important factor.

Yet, even after the entry into a new niche, the assertion of rights to that land appeared not to be the standard route. Sometimes new areas were only used for a short time and sometimes new information or new perceptions on old information made people assess their costs and benefits differently. This, then, leads them to refrain from claims; sometimes they even did so after a former decision to stick to the assertion of the rights to the land.

It has to be added, though, that the three cases are situated at a specific position in the hierarchy of 'pressure because of land scarcity'. Because the advice of ES critics not to study 'evident' cases (see chapter 2 and 3) has been followed, the scarcity level is 'only' intermediate. Whether the conclusions given will hold when the land pressure is really high remains to be seen. Nevertheless, a preliminary reaction may be that, then too, the level of other insecurities, the role of the State and cultural or individual attitudes towards violence are very important.

In short, apart from the support of general wisdom regarding the tackling of a broad range of insecurities of individual actors and groups to prevent violence, the study can not and does not result in one concise causal theory that works for the three cases or (even less so) for (all) other cases. Indeed, security specialists can still not rely on quick fixes to prophesy situations hoping to prevent outright violence. Because mono-causal linkages could not be found, it can only be deduced that, to improve the grip on conflict situations, partly intuitive notions and insights should be built on the basis of a variety of theories and concepts, fed by case-studies and, thus, an increase of experience. Specific conflicts have a chance to be resolved only by on-the-spot mediators, who, on the one hand, base their actions on full-grown experience and a wide range of knowledge and (not too strict) theory, and, on the other hand, are open-minded enough to keep the specificities of the conflict under study into focus.

8.5.2 Revisiting mainstream Environmental Security notions

In contrast to Environmental Security's straightforward, one-way connection between environmental scarcity and social effects, such as migration, constrained economic productivity and elite rent-seeking (Homer-Dixon 1999: 134) which can only be mitigated by "second-stage interventions" (id), or else will automatically lead to "social segmentation and weakened institutions" (id), the present study shows a more complex, forward and backward moving,

mutually influencing pattern in the diagram. It is never the former action or situation alone that causes the unwinding of the rest of the Violence Cascade. Thus, in the cases studied, it is never land scarcity on its own that gives rise to violence. Indeed, just as the violent encounters influence subsequent strategies, each action described in an 'event' box of the VoE diagram does influence subsequent actions, but more often than not the event boxes are not decisive.

It is the whole complex of insecurity resulting from all the domains that plays a role in the decision-making of actors. The societal circumstances that may trigger violence already exist and are not the result but rather the cause of environmental scarcity[105].

Homer-Dixon's 'lack of ingenuity', for example, may inhibit a proper development of agriculture because of the absence of necessary infrastructure and technology. This then leads to the scarcity of Environmental Use Space. In the same vein, low economic productivity means that land scarcity is felt sooner and more acutely. The cause of the local lack of ingenuity, however, is not the environmental scarcity but (mostly) another societal failure. Perhaps the capture of the State by elites to use its strength for their own benefits (and not the capture of natural resources[106]) and the subsequent neglect of weaker people's interests lies at the basis of this local ingenuity shortage and subsequent violence. Even without 'capture' by elites, "state intervention is indeed a major source of farmers' insecurities" (Platteau 1996: 74), as we have seen in at least two of the case studies. Instead of causing violence, the breakdown of the power of the State may then lead to better arrangements if it is accompanied by an empowerment of civil society.

Another important influencing factor is the performance of conflict resolution from very early conflict phases up to the violent phase. Improper institutions are not only a product of growing scarcity. Again contrary to ES notions[107], the reverse also applies. For example, a lack of management of land tenure issues may lead to resource scarcity for several actors. The breakdown of community rules and regulations in the wake of the rising influence of statutory law (and the connected tendencies towards privatisation[108]) has increased the insecurities with regard to resource access for the weaker members of society, such as women[109]. The lack of conflict resolution has an additional impact when these actors claim what they consider to be 'their' part. In the three cases it is especially the local-level shortage of equal sharing and justice that engenders the environmental scarcity. With the lack of conflict resolution mechanisms, resorting to violence seems more effective when it comes to safeguarding one's share.

Both faulty State involvement and a deficient justice system make people seek other means of safeguarding livelihoods in cases of general insecurities and scarcities. Indeed, in all three cases, the lack of ingenuity (this is the means of improving 'Bebbington's capitals' for individuals and societies), as Homer-Dixon depicted, hinders the necessary agricultural transition according to Boserup's model. Nor has such a transition come about via the nearness of a mar-

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[105] The fight over access to locally abundant resources (such as minerals and diamonds, for example) causes local farmers and herders to suffer from increasing shortage of access to (their) land (see, for example, Moyroud and Katunga (2002) over the struggle for coltan in East Congo).

[106] Homer-Dixon (1991, 1994 and 1999) speaks of "elite rent seeking" with regard to scarce natural resources.

[107] For example in Homer-Dixon's model (1999: 134).

[108] Even if agricultural transition had been successful: Boserup (1965: 92) already warned that it would lead to a loss of land tenure security and a resulting "vast amount of litigation [with] each step on the road to private property in land".

[109] As can be seen in all three cases: free access is denied more and more (see also Goheen 1989a: 375).

ket that engenders the build-up of, for example, infrastructure and intensification (Von Thünen's theory). According to Homer-Dixon in such cases the Malthus-road will inevitably come into existence. However, the cases studied have shown that motivation is higher for a non-Boserupian route that cannot be called Malthusian either. Migration, entering a new niche and doing more of the same at another place, is what happened.

The pressure (experienced) made people use their inventiveness to search for the right arguments, allies and moments for the assertion of rights to these new lands. Even the right methods were invented, via experiments by young men with, among other things, politics, out-migration to job options further away, but also with violent defence of ancestors' fields.

Normally, explorative behaviour by youngsters helps societies to realise the necessary innovations. The curiosity and experimental mood of young men and women has a long-term function at collective level. Ideally, the establishment of a society decides what will be implemented of all those experiments. Increased insecurities and rising scarcity means community elders do not now prohibit the explorative actions of younger members of the group with regard to violence. The use of violence is therefore not a sign of societal breakdown but a deliberate choice for a constructive strategy that even enhances (or is brought about by) stricter community cohesion.

Of course negative societal circumstances may be aggravated or felt more heavily by actors if environmental scarcity adds to the general insecurity. However, which action will be practised next depends on all the factors that have an influence on individual actors. This is shown by the fact that all the actors behave differently. They all perceive and experience the influencing factors differently. Contrary to the inevitable pathways in Homer-Dixon's model, that suggest majority actions, in all three cases only a minority of scarcity-experiencing (or perceiving) village inhabitants chose to invade a new niche, after which a smaller group tried to assert the rights to the area entered and only a very small group resorted to violence (which did not even have much to do with the scarcity felt). Because the path to violence is only taken by a small proportion of those who are affected by scarcity, it is very difficult to predict which factors will cause big enough groups to use violence.

The societal differentiation that took place in each step of the VoE diagram in the cases studied (see Figure 8.6) finally resulted in very small-scale, quickly suppressed violence because only minorities followed the cascade. If 'society as a whole' had followed the steps of the VoE Cascade to violence and had supported those actions (thus, in the case of less societal differentiation) then the violence in Box 4 would have reached a higher level.

Therefore, contrary to the notion of Homer-Dixon that societal segmentation leads to violence, the phenomenon observed seems to point towards the necessity of strong community feelings and displays of loyalty, without which actors refrain from violence. As stated in chapter 2.4, niche differentiation makes it possible for people to live peacefully alongside each other. The role of social divisions is much more complex in violence causation than is conceptualised in ES so far. Indeed, as Collier and Hoeffler (2002: 23) noticed: neither a very much fragmented society nor a totally undivided society risks real civil war.

Segmentation that is situated somewhere between total homogeneity and maximal fractionalisation, with "ethnic dominance", generates the greatest risks. In such situations the position of the tension line may rise quickly for several reasons.

The focus of ES on frustrations and grievances as a cause of violence caused other basic factors that may influence the position of the tension line and, thus, the choice of violence to be neglected. In section 8.5.1., the importance of culturally and personally based factors, such as moral notions and fears are discussed. ES has not yet studied the aggravating effect of a 'culture of violence', nor the inhibiting effect on violence of a non-violent leader standing up in the wake of a conflict, who is able to shift the general moral code (e.g. Mahatma Gandhi).

Indeed also fear is not (yet) discussed in the Environmental Security domain. It certainly relates to the basic biological-physiological mechanism that Sandole (1993)[110] mentions in his list of causes of violence. Yet, Sandole declares that these mechanisms have a triggering role while I have shown here that they can also have an appeasing role. Indeed, in the enrolment of the VoE pathway, fear is a paradoxical factor. Worried people who quickly fear a loss of possibilities and who are distrustful *vis-à-vis* others and the authorities may be prone to quick actions and the rapid invasion of other niches. However, fear will withhold people from violence in the later phases of the VoE diagram. However, as is depicted in Figure 8.7a, such people may support the narratives of those who (want to) use violence. With that they raise the tension line and ensure a small DtV.

Last but not least, the position of the tension line may be high wherever people feel their metaphysical needs, their psychic needs, are being threatened. So far in ES the focus seems to be on economic causes of the outbreak of violence. But, as is said before, this is only part of the whole explanation. Especially in struggles over land, the role of that land as a bearer of meaning can make actors fiercely defend their rights to it. People can bargain or even beg when it comes to physical needs, but identity is indispensable to human beings.

8.5.3 General conclusion regarding the VoE diagram

The use of the Violence-or-Escape model in the exploration of three different cases has shown that, next to striking similarities, there are considerable differences between the cases. At the same time, the general patterns that emerge, especially when analysing at the detailed level of the diagram, show the usefulness of a descriptive model. A certain level of generalisation about a cascade of causing factors and definitive outcomes is possible. Sufficient proof has been provided that the steps in the VoE diagram are not only helpful, but also provide a framework by which a general pattern can be discerned.

The model designed for this study can be used to guide investigations: for prevention (early warning or discerning moments of effective intervention and the direction thereof) and/or for *a posteriori* insight. It is advisable to note detailed descriptions of each case studied, while following the steps of the VoE diagram, as was done for the three cases of the present study. Subsequently, the analyses of the events described have to be guided by the explanatory models, like the "A versus Non-A" models described in chapter 2. As has been shown, this means that, while combining the different theoretical notions within one research-diagram, it is almost impossible to 'forget' influencing factors. With this it is more encompassing than the well-known Homer-Dixon model (1991, 1999).

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110 See Chapter 2.

At the same time, it is possible to compare different cases because the format used by way of the VoE diagram is very strict. Yet, as is recommended by George (1979), it is not so rigid that it does not permit case-specific observations.

In general, the VoE diagram has stood the test of an encompassing model that is designed to describe completely a chosen part of reality, to help understand that reality. The completeness is aimed at by incorporating both the violence cascade and all non-violent pathways, and the general pattern of influencing factors on all levels. Notions, such as those developed in sections 8.1.4 and 8.5.2, have to be born in mind, like other theories of the A-non-A type that have been used. However, the study makes clear that some enhancements to the VoE diagram have to be made to increase the completeness, without losing clearness. For example, especially the Baba Deli case has shown that an extension after Box 4 is relevant. After a violent event, stronger assertion may take place involving more violent means, and therefore with more chance of escalation (see Figure 8.1). The feedback loop to the beginning of the diagram is not enough.

Another observation concerns the difference in value of the arrows depicting the route from event box to event box and those depicting the influencing and 'other' factors. Superficially, they reflect the same: actions noted in the event boxes and the 'other factors' can both be causes of the event focused on. However, other and influencing factors are a conglomerate of different perceptions, institutions and secondary (or tertiary) actors' activities, while the 'event' boxes depict actions by the primary actors.

Although claiming rights without entering the new niche was mentioned while discussing the structure of the model in chapter 2, the general possibility of relationships between boxes that do not follow directly in line of the VoE diagram, which circumvent the boxes in-between as it were, is not visible either in the VoE diagram. For example, Box 1 can lead directly to Box 4, without the interim steps of entry into and assertion of rights of new lands. All escape boxes can still lead to subsequent event boxes in the direct Violence Cascade. Actors that perceived a diminishing Environmental Use Space and chose to invest in other economic possibilities were later able, via an increase of knowledge about State law and citizen rights (e.g.), to reconsider their decision not to claim land. It is even possible that they fuel identity claims and fund violence.

Thus, to keep the diagram 'simpler than reality' and therefore make it a useful model, both the fact that steps between boxes can (and mostly are) split up into smaller steps, and the fact that in some circumstances and by some actors some steps are not taken at all (the 'jumping over' boxes), are not visually depicted in the VoE diagram. When analysing influencing factors, however, such details will come to the fore.

In short, the diagram has been shown to be useful for both individual case studies and for comparative exercises designed to result in an enhancement of the theory. As a result, the research has produced a general, rough pattern that becomes visible when searching for linkages between resource scarcity and violence. In addition, the research has shown that the "easy cascades', like the one modelled by Homer-Dixon (1999), are faulty most of the time. Several connections show a reverse pattern to the one depicted in the Homer-Dixon model. Each step is in reality influenced by many more factors than are shown in those diagrams and many elements referred to in the diagrams have their influence in many more situations than just the one depicted.

Appendix

Precipitation data of several pluviometric centres in the Far North of Cameroon and some other climatic data (n.av. = not available)

Table 1 Rainfall per month, last five years of last century; in Bourah (10° 15' N; 13° 31' E; 775m)

	March	April	May	June	July	August	Sept.	Oct.	Nov.	Total
96	trace	22.5	170.3	138.3	112.5	240.3	183.8	58.8	0	926.4
97	0	65.5	102.5	147.8	202.3	246.6	349.3	78.9	0	1192.8
98	0	52.1	105.6	107.7	321.2	305.5	162.9	115.6	0	1170.6
99	0	0	43	212.4	110.4	307.7	182.2	180.1	0	1035.7
00	0	84.2	67.8	195.8	216.5	336	110.5	65	0	1075.8

Source: Pluviometric station, Agricultural Service of Bourah

Table 2 Rainfall per month, in Sir (10° 34' N; 13° 40' E; 920m)

	March	April	May	June	July	August	Sept.	Oct.	Nov.	total
92	0	26	102	107	143	332	140	26	0	875
93	0	43	61	161	208	222	160	10	0	976
94	0	127	31	191	343	550	0	0	0	1242
95	0	65	64	77	155	315	177	47	0	896
96	0	20	55	106	160	192	241	20	0	794
97	110	0	161	105	302	320	239	49	2	1287
98	0	24	63	195	223	379	172	78	0	1133
99	0	Trace	94	78	203	332	192	167	0	1066
00	0	27	62	158	335	581	85	34	0	1282
01	0	74	165	167	329	300	216	4	0	1286
02	0	71	0	241	131	152	211	105	7	935

Source: Collection of Precipitation Data of Mission Catholic de SiR

Table 3 Rainfall 1995-2002 in Mogodé (±10° 37' N; 13° 34' E;1008 m)

Years	1995	1996	1997	1998	1999	2000	2001	2002
Mm rain	9990.8	829.86	1181.8	1068.2	735.1	819.8	1048.7	1038.8
Number of days	92	87	94	84	90	59	68	81
Nr. of months	8	7	7	7	7	7	7	8

Source: Pluviometric station, Agricultural Service Mogodé.

Table 4 Monthly mean temperatures in Mogodé

Months	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Minima 2001	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	22	21.2	20.8	23.3	22.8	19.5
Maxima 2001	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	27.8	26.2	29.4	33.8	34.6	33.6
Minima 2002	16.4	20	25.6	27.4	27.9	24.4	22.8	21.5	21.6	22.9	22.9	n.av.

Source: Pluviometric station, Agricultural Service Mogodé

Table 5 Precipitation over the months and years in Doukoula (10° 07' N; 14° 58' E; 340m)

	April	May	June	July	Aug	Sept	Oct	Year total
1995	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	960
1996	94	101	286	136	284	251	46	1198
1997	45	112	78	162	339	67	54	857
1998[a]	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.
1999	0	56	70	109	281	189	106	811
2000	17	27	82	276	190	98	8	691

[a] = In the year report for 1998 as well as in the SODECOTON archives and computer files for that year, precipitation data of the Doukoula region has disappeared. The same applies to 2001-2003 (last visit to archives of SODECOTON Tchatibali: January 2004)

Source: SODECOTON Pluviometric station Doukoula (year reports SODECOTON and archives)

Table 6 Precipitation over the months and years in Tchatibali (10° 04' N; 14° 55' E; 340m)

	April	May	June	July	Aug	Sept	Oct	Year total
1995	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	n.av.	1040
1996	49	146	220	120	381	225	21	1162
1997	102	101	134	118	327	76	25	883
1998	11	62	111	126	452	238	49	1049
1999	8	47	41	214	397	204	49	960
2000	21	39	80	172	243	62	44	661
2001	12	129	18	250	302	275	3	989
2002	18	43	71	142	231	142	40	687
2003	22	13	202	270	286	289	14	1096

Source: SODECOTON Pluviometric station Tchatibali (year reports and archives SODECOTON).

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