Dimensions of vulnerability of livelihoods in less-favoured areas: interplay between the individual and the collective

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Abstract

The geographical concentration of persistent poverty in so-called less-favoured areas calls for a critical look at the link between poverty and environment. Livelihood studies tend to focus on poverty at the individual level, whereas the concept of less-favoured area implies a problem for the collective. Studies on vulnerability tend to be biased towards external eco-logical causes at the regional level, while studies on coping and survival usually focus on the household. However, recent insights about the internal and external dimension of livelihood vulnerability in less-favoured areas provide an argument for linking both dimensions to dynamics at the individual and collective level. At an aggregate level, individual and household responses to vulnerability lead to intended and unintended effects, while there is also evidence of collective responses to factors originating from the external vulnerability context. These linkages between the external and internal dimensions of vulnerability and responses at the individual, aggregate and collective level should be studied to understand and mitigate current trends of increasing vulnerability of livelihoods in less-favoured areas. Emerging key issues are analysis of change, analysis of livelihood pathways, aggregate consequences of behaviour, and cultural dynamics.

Context

The RESPONSE research program is a joint research program by Wageningen University and Research Centre (WUR) and the International Food Policy Research Institute (IFPRI) that was initiated in 2001. RESPONSE is the acronym for Regional Food Security Policies for National Resource Management and Sustainable Economies. The program has a spatial focus on less-favoured areas.

Though this paper addresses issues dealt with by the RESPONSE Working Program 2, namely livelihoods and food security, it has a broader scope because it also reviews recent empirical evidence on the subject other than the findings yielded by this working program. It includes the results of recent (2000-5) research on livelihoods in less-favoured areas, more in particular work carried out by researchers of the Dutch research schools Mansholt Graduate School (MGS) and the Research School for Resource Studies for Development (CERES). In this paper less-favoured areas are not just treated as a given context. Instead, the emphasis is on the dynamics of the interfaces between characteristics of less favoured areas and the livelihoods of people in those areas, and the implications of this for vulnerability.

Introduction

Poverty is considered to be an important constraint for sustainable development at local and global levels (Worldbank, 2002; 2004). Much global poverty is geographically concentrated in

so-called less-favoured areas and is related to ecological and social vulnerability. The principal aim of this paper is to analyze the interaction between livelihoods and the geographical environment in less-favoured areas. Current literature on livelihood draws on a long tradition of social-economic, geographical and anthropological research. At the same time, the sustainable livelihoods framework, the human-ecology literature and agro-economic studies are increasingly integrating questions and findings from the ecological sciences.

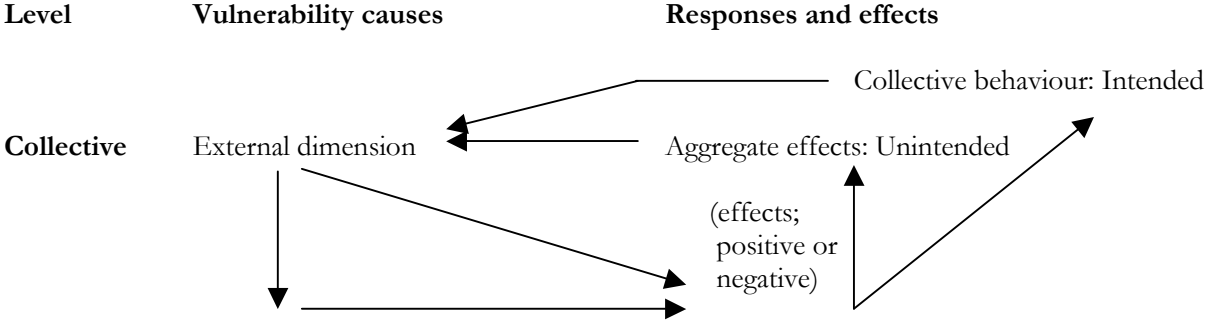
Less-favoured areas can be defined in different ways. Place-oriented bio-physical features of such areas define such categories like 'dry lands', 'highlands', 'uplands', or 'wetlands'. The place-specific man-made infrastructures and the institutional environment in such areas have to be considered as well because of their intermediary role in the interface between the bio-physical environment and household livelihood generation. In addition to these place-derived characteristics, there are also 'space-derived' characteristics that refer to the distance of 'less-favoured areas' to major economic centres, harbours, cities, and centres of political power and decision making. Distance is used here in a spatial, political and cultural sense, in the literature often captured by the concept of marginality.

In this paper, a less favoured area is seen as an area that combines problematic bio-physical characteristics with a poor man-made physical and institutional environment and a marginal location. The literature on livelihoods in LFAs emphasises that vulnerability of the environment is an essential part of the vulnerability of livelihoods. In order to assess the importance of environmental conditions in rural areas we focus on vulnerability as the linking concept between environment and livelihoods.

Livelihood studies commonly distinguish an internal and an external side to vulnerability (Chambers, 1990). This paper relates this distinction to the distinction between micro-level strategies and macro-level outcomes (Krishna, 2004) and to that between the individual and the collective (Rudd, 2003). At the macro or collective level changes occur due to aggregate effects, intended and unintended. Typical aggregate effects are market cycles, changes in biodiversity, or cultural changes. Intended effects may result from collective responses. These effects modify external vulnerability conditions and, as we shall see, also have a differential impact on internal vulnerability.

Figure 1 illustrates the different dimensions of vulnerability and reflects the structure of this paper. The concepts of internal and external vulnerability and the individual and collective dimensions (left-hand side of Figure 1) will be discussed in the next section. The section that follows discusses internal and external vulnerability in relation to ecology, institutions, culture and economy. This is followed by an inventory of technical and socio-economic individual responses to vulnerability, after which we turn to the dynamics at the collective level: the unintended aggregate effects and the intended changes through collective behaviour (right-hand side of Figure 1). We conclude that the aggregate effect of responses is a blank spot in livelihood literature and that this has implications for further research and policy-making.

Figure 1 Dimensions of vulnerability



The paper builds primarily on recent empirical and theoretical studies on vulnerable livelihoods carried out by researchers working at Dutch universities. The cases of less-favoured areas are mainly from three regions: West-Africa, the horn of Africa, and Southern Africa, many of them focusing on semi-arid or sub-humid areas (dry lands). Additionally, we use insights from studies in areas in Asia to illuminate certain aspects of vulnerability processes or provide evidence of specific effects or responses.

Vulnerability in livelihood studies

The concept of livelihood refers to what people do for a living, how they do it, and what they gain by doing it. One of the most commonly used definitions is that of Ellis (2000: 10): "A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household". The focus on vulnerability in current livelihood studies signifies a renewed interest in structural context that could help explain the persistence of poverty in less-favoured areas. In this section we disentangle the ideas that lie behind this concept and the implications these ideas have for further research. We focus on areas where vulnerable livelihoods converge with vulnerable environments.

Blaikie *et al.* (1994: 9) define vulnerability as "the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist and recover from the impacts of natural hazard". Chambers distinguishes an external side of vulnerability in the form of risks, shocks and stress to which individuals or households are exposed, and an internal side that refers to the ability to cope without irreversible loss of assets (Chambers, 1990). We will relate this distinction to the dimensions of the individual and the collective. While external vulnerability is basically a collective concern, it is in fact intricately entangled with individual vulnerability and coping behaviour.

Ecological and environmental studies refer to external vulnerability in the description of fragile environmental conditions. Environments are called vulnerable when components of the system reach a certain threshold that makes them unable to bounce back after shocks and disasters (Fraser, 2003). Ecosystems that degrade after deforestation are an example of this sort of vulnerability, but also ecological variability with unpredictable rainfall and high evapotranspiration rates renders an environment ecologically vulnerable (Dietz *et al.*, 2004). Livelihood studies add the human dimension. An environment characterized by unreliable rainfall, drought, flooding, and climate change puts livelihoods under stress. The extent to which livelihoods can cope with this has been the focus of interest in much livelihood research.

Current livelihood frameworks most used in the literature draw on the conceptual models from Scoones (1998), Bebbington (1999), Ellis (2000) and Rakodi (2002). The vulnerability context is made operational by reference to trends in climate, population numbers, political change, war, terms of trade, food production and social differentiation, comprising factors that are assumed to be beyond individual control but have a negative impact on livelihoods. While the context constitutes the external side of vulnerability, its internal side refers to the specific characteristics of a person or a group that exacerbate their susceptibility to shocks and stress (Chambers, 1990). The internal side of vulnerability is a result of entitlement failures and lack of access to certain capitals. Current livelihood frameworks distinguish a pentagon of types of capital that people can draw from for their living (DFID, 2001; Ellis, 2000). These capitals include contextual features such as physical and institutional infrastructures and societal norms, as well as individual assets. Liabilities are the opposite of assets.

An individual characteristic like gender becomes a liability in a society based on gender inequality (e.g. Niehof, 2004; Bebbington, 1999). Kevane (2000) provides an example from western Sudan where gender-discriminatory regulations forced women to close down their roadside shops, thereby blocking their access to income-generating activities.

In less-favoured areas part of the vulnerability context is located in the biophysical environment and other parts are located in the societal context. In large parts of sub-Saharan Africa HIV/AIDS forms part of the external vulnerability context of rural households (Blaikie *et al.* 1994, Barnett *et al.* 2000), but civil war and violence (e.g. Salih et al. 2001) and the high risks of price volatility on international markets for primary products and services may do so as well. The internal dimension of vulnerability has to do with the characteristics of individuals (age, sex, education, skills, health status, etc.), households (gender of headship, income, asset ownership, dependency ratio, etc.) and other micro-networks (e.g. Van der Geest and Dietz, 2004).

Parallel to internal and external vulnerability features we distinguish individual and aggregate effects of responses to vulnerability. While for studies on livelihood strategies individuals and households are the focus, for studies that start from the context of less-favoured areas the focus is the collective of people living in such an area. For both types of studies the existence of feed-back mechanisms between livelihood strategies and the societal and ecological context needs to be considered (Ruben *et al.*, 2005). Seen from the perspective of households as actors, the vulnerability of poor households forces them to engage in low-return and low-risk activities, which prevents them from fully realizing their economic potential (Brons, 2005). At the aggregate level, less-favoured areas are characterised by poor natural resources (ecological vulnerability) and poor institutional infrastructures (societal vulnerability). Recent special issues of the journal World Development also emphasize the persistent problems of chronic and extreme poverty and of environmental degradation and the consequent need to address these by collective action (Sunderlin *et al.*, 2005; Green and Hulme, 2005; and Barrett *et al.,* 2005). Hence, to better understand poverty we need to look at the external and internal side of livelihood vulnerability and the individual and aggregate effects of people's activities to improve their livelihoods.

External and internal causes of vulnerability

For looking at the causes of vulnerability, we will consider the thematic domains of ecology, institution, culture and economy. This discussion of causes of vulnerability anticipates the next section's analysis of responses to vulnerability.

First, the ecological capacity to cope with shocks and the potential occurrence of shocks are of crucial importance to livelihood systems. Ecological sciences point at the effects of the exploitation of natural resources on the potential incidence of shocks (Fraser, 2003). As a result of poverty, ecosystems are susceptible to shocks because of fragile soil conditions and lack of investments in conservation techniques. The fragility of ecosystems is a function of the disequilibrium conditions of the environment. A disequilibrium environment (a term stemming from the New Range Ecology, see Behnke *et al.* 1993) is characterised by ecological instability caused by erratic and patchy rainfall. Unpredictability and little surplus generation are indicative of a highly vulnerable environment. Due to limited surplus generation households do not have the means to invest in natural resource conservation. However, there are examples of resource conservation as a consequence of increasing population densities (Adano and Witsenburg 2004; Tiffen and Mortimore, 1994; Zaal and Oostendorp, 2002). Adano and Witsenburg studied the impact of sedentarisation of nomadic people in Kenya and concluded that in some parts of the Marsabit Mountain area bio-diversity and biomass

may have increased, with a positive effect on the water retention capacity. This example shows the unintended positive effects on ecological conditions of poor people's activities.

Human (ecological) vulnerability is indicated by high morbidity and mortality (Hoogvorst, 2003; De Bruijn and Van Dijk, 1995). According to Iliffe (1987) there was always a large group of structurally poor people in Africa, who had no access to labour, and there have always been poor people whose poverty is a result of stochastic shocks. Vulnerability to poverty is extreme when structural and conjectural poverty converge. "Arid Ways" is among the few livelihood studies that give an account of how people do *not* cope (De Bruijn and Van Dijk, 1995). Its distressing tale explains the persistence of poverty, showing how individual liabilities like illness, handicaps, ignorance, fear and individual depression are linked to the context of structural poverty, ecological stress and political neglect. Another illustration is the way extremely weak economies engender social problems such as high morbidity, risky behaviour (HIV/AIDS), damaging conflicts (Bryceson and Fonseca, 2005), or alcoholism (Hoogvorst, 2003), thereby increasing societal vulnerability.

Resource scarcity has an impact on social processes and is frequently mentioned as a cause of conflicts, but in many cases the vulnerability of the society catalyses conflict to a much larger extent than the scarcity of resources itself. Political instability seems purposely masked with adverse ecological conditions (Adano and Witsenburg, 2004). Research in Northern Kenya revealed that violence causes twice as many deaths in years of abundance than in drought years (Witsenburg and Adano, 2003). This is opposite of what is usually expected in resource-poor areas.

Second, institutional dynamics have differential impacts on people's vulnerability depending on the social organisation that lies between the household or the individual and the context. Local institutions as an important societal layer have been the focus of several livelihood studies. Adano and Witsenburg (2004) illustrate inequality in access to resources in a study on the local practices of the land committee in the allocation of land to impoverished pastoralists in settlement areas. The local land committees are organised at community level. The ways in which these committees function are so obscure that villagers seemed to follow different procedures of negotiation, bribes, taxes, and filling in forms. From survey research it became apparent that those who had few or no animals waited more years to acquire land than those who had large herds. The local land committee appointed by the council and traditional in its practices, seems a blend of modern and customary institutions. However, such institutions may reinforce class and gender inequality. In the same book there is a study on institutions of insurance and risk-mitigation. Complex arrangements in livestock holding secure the wealthy layers of pastoral society of resources, but the poorer segments of the society have very little access to these institutions. A similar observation is made in a study on social security systems in a remote village in Indonesia (Nooteboom, 2003). War and political instability may lead to extreme institutional vulnerability, as is illustrated in a study on Somali refugees (Horst, 2003).

Informal institutions, like committees of elders in many African villages are sometimes characterised by high transaction costs relative to formal institutions. For example, agreements that are reached or decisions taken informally among village elders or by local chiefs tend to be unstable, have no formal legal backing, have to be constantly renegotiated, are not transparent and can differ from one day to the next. Poor people cannot bear such transaction costs. In spite of the importance of the workings of informal institutions for livelihoods, the livelihood literature seems to pay scant attention to them.

Third, culture should get a more prominent place in livelihood research. Culture largely defines what people should or should not do, what deviant behaviour is, and how this behaviour can finally make or break the structures that keep people poor. Cultural stigmas that discriminate against groups and informal institutions that exclude people can be strong

and persistent (Negash, 2001; Nayaran *et al.,* 2000). Overcoming poverty requires overcoming culturally-underpinned normative structures that keep people poor.

Fraser (2003) acknowledges that culture remains a gap in his framework that connects ecological fragility and social vulnerability. He recommends the use of ethnography for investigating the vulnerability effects of culture. Even though transforming structures and institutions have been themes of research in livelihood studies, culture-based structural (institutional) features are still often ignored in current livelihood research. In an overview of theory and practice in livelihood studies, De Haan and Zoomers (2005) propose to refocus research on access to resources and on the power relations that define entitlements. Gender is probably the most salient and best studied aspect of culture dynamics (De Haan and Zoomers, 2005; Negash, 2001; Niehof 2004).

Fourth, regarding the economic domain it has been observed that absence of a large enough economic base is a major reinforcing cause of poverty (Brons, 2005; Haggblade *et al.*, 2002; Campbell *et al.* 2002). Market integration and reduced distance to markets can improve livelihoods considerably. Adano and Witsenburg (2004) describe how livelihoods among settled people on Marsabit Mountain improved when households were able to sell products on the market. However, for nomadic people being integrated into the local meat market is an indicator of adverse conditions, because people only sell their animals when they are in trouble. Dependence on markets can bear serious risks for people whose livelihoods are specialised and non-diversified.

The local economy often influences and is being influenced by migratory processes that may have positive as well as negative implications. People migrate because they intend to earn a living elsewhere; which means that the local situation is not satisfactory. However, migrants usually come from the wealthier layers of society (De Haas, 2004). Migrants (and refugees) are people who exercise their agency to free themselves from restrictive structures. The remittances to the sending areas may have an important welfare-increasing (Horst, 2003), or a multiplier effect (De Haas, 2004) on the sending area. However, an important negative outcome of out-migration is the paucity of young, healthy, dynamic and risk-taking people in a population. In very marginal areas, where the best part of society has left and investments are absent, the cumulative effects of structural poverty converge to the extent that the people left behind cannot cope (De Bruijn and Van Dijk, 1995; Francis, 2000).

The review of ecological, institutional, cultural and economic processes illustrates a growing and renewed interest in structures and multi-level research. All point to a renewed interest in a context that surpasses the local concern. Besides attention for various geographical levels, also the effects of human action on both ecological and societal contexts are increasingly attracting scholarly attention. Conversely, the vulnerability context appears to have a large differential impact on responses and outcomes due to different levels of internal vulnerability.

Responses and effects

In response to societal and ecological vulnerability people seek to secure their livelihoods. Broadly categorized we distinguish technical and socio-economic responses of households to safeguard subsistence and avert vulnerability. Though both types of responses are closely linked and cannot be analysed independent of one another, for the sake of clarity we start with the responses that are mainly either technological or socio-economic in nature, and then highlight combined responses.

Technological responses include i) resort to specific niche production opportunities, ii) soil and water conservation technologies, iii) dissemination of production technologies with higher rewards for labour.

An important study in this context is the research on Enset cultivation in Ethiopia (Negash, 2001; Negash and Niehof, 2004). Enset (*Ensete ventricosum Welw. Cheesman*), also called 'false banana', is a major food crop in south-western Ethiopia that can be cultivated in the backyard and requires only low inputs. Enset is fairly drought-resistant and provides staple food, medicines, and building materials to households. Although the plant is quite resilient, its biodiversity is in jeopardy due to lack of attention of researchers and policy-makers. There are other studies that also highlight the role of ecological diversity and home gardens for household food security (Roa, 2005; Balatibat, 2004).

Soil and water conservation techniques have received longstanding attention from development agencies (De Graaff, 1996). Following scepticism on the effects of massive adaptation of micro-level soil and water conservation techniques, some recent studies report successful impacts of these technological interventions on resource conservation, though without explaining the underlying causes for the success (Mazzucato and Niemeijer, 2000; Reij and Thiombano, 2003). While most studies use the livelihood framework to analyse technological impacts, Meinzen-Dick *et al.* (2003) start from an inventory of agricultural production technologies. They show that technological development has a large impact on crop productivity, food prices, and informal networks. Although the direct poverty alleviating effect may seem small, enhancement of household and collective social capital improves the prospects for reducing livelihood vulnerability.

Socio-economic responses encompass i) a change of the portfolio of economic activities, ii) the use of household and individual networks, iii) exchange and entrust strategies, and iv) cultural responses.

A study on income diversification in Burkina Faso (Brons, 2005) points to the inefficacy of economic diversification to overcome poverty when households diversify their portfolio in a situation of excess capacity. In contrast, other studies emphasize income diversification as a strategic and effective response to vulnerability (Van der Geest, 2004; Freeman *et al.,* 2004; Niehof, 2004). Research in Bangladesh showed that households diversified their sources of income after the devastating floods of 1998 (Ali, 2005). Apparently, diversification may work as a survival strategy, but it has only little effect in local economies that are characterised by excess capacity and little surplus (Brons, 2005; Haggblade *et al.,* 2002).

Migration can be a diversification strategy in response to local vulnerability. However, migration tends to be a structural feature of a society rather than an ad hoc response to situations of stress (Henry *et al,*. 2004). Access to migration opportunities appears to be limited to relatively better developed areas, such as some oases in Southern Morocco, and within the relatively wealthier households in such areas (De Haas, 2004). Remittances to and investment in the sending area may actually increase societal and ecological vulnerability. In Burkina Faso access to international migration tends to be limited to few households, again in the relatively better endowed villages (Wouterse and Van den Berg, 2004). In the latter study, the effects of remittances on the sending villages were found to be much less important than in the case of Morocco. In other studies, migration brings about opportunities in terms of better income and connection with urban markets (Kuiper, 2005; Horst, 2003), but also threatens household stability and increases exposure to insecurity (Francis, 2000).

A study by Dekker (2004) among rural households in Zimbabwe illustrates the role of social networks in the way households cope with income shortfalls and the role of bride wealth payments for long-term social security. The study focuses on security mechanisms to control vulnerability. A similar study analyses long term social security strategies in an upland village in Indonesia, documenting the complexity of the social security system in a village with large income inequalities and economically and ecologically fragile livelihoods (Nooteboom, 2003).

Insurance against risk is in this context only partial, not transparent, and only accessible to those who are able to contribute to the existing arrangements.

An inventory of responses to drought and famine in Ethiopia yielded a list of mainly socio-economic measures (Teshome, 2003). Households reduce consumption, deplete their assets, and minimize the level of consumption, while at the same time they develop activities to regenerate their livelihoods. From this list can be learned that income shortfalls often trigger fundamental changes in livelihoods.

Responses that are strongly culturally underpinned often only receive marginal attention in livelihood studies, yet culture is important in providing or constraining options and shaping responses, as is illustrated by some recent studies. In Ethiopia households prefer to have many children to gain social security (Negash, 2001, Negash and Niehof, 2004). In Bangladesh early marriage strategies aim at safeguarding girls from abuse (Huq, 2000). Although many studies confirm the structural vulnerability of female-headed households, the study of Mtshali (2002) also shows that in a patriarchal culture widowed women can benefit from a situation of having no husband because of lesser control on their mobility. However, in general a widow's legal or customary lack of entitlements, notably rights to land, puts her in a situation of insecurity (Niehof, 2004). The studies of Balatibat (2004) and Mtshali (2002) provide striking examples of vulnerability of households because of individual risks. Sending households cannot rely on remittances from their migrant members, because migrants fall ill, lose their job, or forget their commitments to their household of origin. Many studies show that as a result of stress domestic relations may become unstable which, as noted by Francis (2000), frequently leads to gender-related conflicts.

A recent study on famine conditions in Malawi points to serious erosion of social cohesion and commitment among small holders in a rural peasantry disadvantaged in terms of infrastructure and social services (Bryceson and Fonseca, 2005). The study concerns people who have virtually no means of living (internal vulnerability) and are in a situation of increasing exposure to HIV/AIDS risks (external vulnerability). As coping strategy, women forestall destitution by engaging in prostitution. People's responses to the disastrous and gendered impacts of HIV/AIDS on rural livelihoods in large parts of sub-Saharan Africa, are by now becoming well documented (see for an overview Müller, 2004, 2005a, 2005b).

Livelihood studies generally ignore the role of violence and warfare, while it is clear from conflict studies that warfare destroys environmental and physical endowments, and obstructs access to otherwise available resources. The destruction of human lives and livelihoods, and the withdrawal of labour from productive to vigilance and defence activities exacerbate poverty. On the other hand, violence and warfare does result in spoils for some, due to pillage and plunder, and benefits for others such as employment in armies of government agencies and warlords, remittances and indirect benefits. This may also generate institutional and technological change and economic and cultural breakthroughs (see case studies in Salih *et al.*, 2001). The few examples of combined livelihood and conflict analysis (e.g. Adano and Witsenburg, 2004) show so many unexpected results that the need for more of such analyses is obvious, also to counter the many superficial statements on this issue in the literature, often from a political science background (e.g. Homer-Dixon, 1999).

Combined technological and socio-economic responses reveal the synergy between societal and ecological processes. An example is provided by the sedentarisation of herder families in response to increased vulnerability because of prolonged trends of pastoral decline (Adano and Witsenburg, 2004; Breusers, 2001; De Bruijn and Van Dijk, 1995). Sedentarisation often implies a dramatic shift in livelihoods with consequences for those who settle, those who retain a nomadic livelihood, and the population in sending and target areas. In Kenya, settlement combined with a gradual shift towards crop husbandry is the basic response to loss of

animals (Adano and Witsenburg, 2004). Herder families prefer to maintain their nomadic livelihoods until adverse conditions force them to settle. Once settled, they encounter all kind of institutional barriers in rebuilding their livelihoods. In Mali and Burkina Faso, sedentary as well as nomadic households in the pastoral northern zones seek refuge in urban or rural areas (De Bruijn and Van Dijk, 2004; Breusers, 2001). Whether sedentarisation is successful appears to depend on access to networks.

Another example of combined responses relates to soil and water conservation at plot level in eastern Burkina Faso (Mazzucato and Niemeijer, 2000). Farm households rely on intensive social networks to gain access to the resources necessary to keep their plots fertile. The study of Mazzucato and Niemeijer documents household strategies to conserve arable fields, but does not go into the causes of chronic poverty in the area. A meta-study on responses in dry-lands to climate change shows a rich mixture of technological and socio-economic responses at the individual and collective level (Dietz *et al.* 2004). The study emphasises the adaptability of rural households' livelihood strategies. A striking finding is that of the far-reaching processes of change that occurred at different societal levels (Van Dijk *et al.*, 2004; Bryceson, 2002). From one generation to another, land use technologies, control over natural resources, economic activities and institutions changed dramatically. These changes can be regarded as responses to increased scarcity of natural resources and demographic change. The responses seem ad hoc and unorganized, rather than driven by strategy. This can be partly explained by the disequilibrium conditions of vulnerable areas and the absence of surplus generation.

The responses appearing in the above review have in common that they concern mainly household level responses. The previous section on vulnerability showed that the livelihoods framework incorporates aggregate effects, but does not address the question how households perceive and make use of the aggregate effect of their activities. The diversification study in Burkina Faso does not analyse why rural households continue to diversify their economic activities and how they perceive the common problem of excess capacity (Brons, 2005). The social security study in Zimbabwe (Dekker, 2004) analyses social processes in detail but uses the household as the locus of social security and ignores existing visions on the prevailing social security system. In many studies, responses to vulnerability are mostly the result of an inventory of events after a shock in livelihoods (Teshome, 2003). Consequently, the question arises what households did in anticipation of shocks that would appear sooner or later. A critical look at the response and outcomes documented by the studies further shows that few studies provide information on structural causes of success or failure.

Linkages between the household-level and collective responses and constraints

The previous sections show that livelihood studies have largely focused on analysing household practices to avert vulnerability and emphasize ecological variability and fragility as main causes of livelihood vulnerability. A combined analysis of the internal and external sides of the vulnerability of livelihoods in less-favoured areas shows that institutions cause a differentiating impact on household livelihood vulnerability.

The recognition of the role of institutions is an important step in understanding poverty, but does not resolve the bias in livelihood studies of an overemphasis on the household level. Household practices and outcomes are conceptualised in a pentagon of measurable, mainly material, assets, which are subsequently used in income and security generation. There has been little attention for the existence of liabilities and large-scale processes of destitution and marginalisation. The conceptual focus on measurable assets has led to a methodological bias of measuring practices such as income generation, wealth accumulation, migration and social security from the perspective of the household. It can also be noted that virtually no livelihood studies pay attention to how actual wealth distribution patterns are perceived by

individuals, while the actors' knowledge of and attitude towards wealth distribution can be expected to influence livelihood practices.

It is important to forge this often missing link between household livelihood performance and the external vulnerability context shaped by the ecological and institutional environment. As is noted in a study of why households in India move in *and* out of poverty: "Quite different things are happening in different villages and also in different households" (Krishna, 2004: 126). The same author also concludes that micro-level motives are complex and varied, and that connecting micro-level strategies with macro-level outcomes is difficult (Krishna, 2004: 131). Nevertheless, this is what we believe should be done.

Despite the fact that most studies do refer to contextual processes, an image emerges as if people respond rather ad hoc to vulnerability. This is an incomplete, if not false, image. As discussed above, migration studies reveal that in less-favoured areas there is a net outflow of relatively well-off and physically strong people. Consequently, such areas are inhabited by a negative selection of those unable to migrate. Social security systems may lack transparency, and the use of natural resources is often poorly regulated. An interesting study in this respect is provided by an ODI report on the efficacy of community forest management in India (Sarin *et al.*, 2003). The report shows that where people are dependent on the forest for livelihood needs like fuel wood, fodder, and wild plant foods, they develop a collective vision on its value and on the need for preserving it, in which women play a crucial role, and regulate access to and use of forest products. However, once the government steps in by way of laws and regulations, and the forest acquires regional and national commercial significance, the indigenous community management system succumbs under the pressure. The result is more gender inequity and increasing livelihood vulnerability.

We will put forward some conceptual and methodological issues that may help to overcome the one-sided focus on internal vulnerability. The external side of vulnerability and the structural constraints that keep people poor needs to be investigated by using appropriate research methodologies. A broader focus such as we propose could shed new light on the dynamic relationship between the individual and the collective.

A first point is that the possibility should be recognized that poverty may seem structural at regional levels but is transient at the household level (e.g. Collier and Gunning, 1999). Adano and Witsenburg (2004) looked at household capital over a number of years, and concluded that those who are poor before and after a crisis are not necessarily the same people. Households react differently to shocks and, also depending on the stage of household formation, are able to climb out of poverty over time. Numerous case studies yield evidence of transient poverty (Ali, 2005; Krishna, 2004; Huq, 2000; Mtshali, 2002). But also 'change' itself has not been taken seriously. To investigate it, we would need a much more thorough assessment of the past, including archival research. In addition, analysis of panel data, though cumbersome and expensive to collect, is a way to measure livelihood outcomes before and after a shock. A recent study on rural Bangladesh (Ali, 2005) could use IFPRI panel data of livelihood indicators before and after the floods of 1998, but such data is rarely available. If we want to understand the geographical concentration of poverty, we must also know whether such a region has been inhabited by the same people over time. There is reason to believe that there is much more mobility than the often somewhat static livelihood studies suggest.

In the analysis of the context, ecological factors seem to have dominated over societal ones. Ecological vulnerability is more tangible and better recorded than societal vulnerability. Strikingly, many livelihood studies refrain from analysing societal processes at the collective level. Yet, it is at this level that the causes of persistent poverty and vulnerability are to be found (Barrett and Swallow, 2003). An exception is formed by the growing body of literature on the consequences of the HIV/AIDS pandemic that shows how externally generated

vulnerability impacts negatively on individuals and households through stigmatisation and social exclusion. The existence of an extremely poor layer of people in a society suggests that there must be shared perceptions of poverty and inequality that can help explain why people are and stay poor. Additionally, a better understanding of culture, norms and informal institutions (like ethnic identity, gender roles and norms, rites of passage) is needed. Culture should not be assumed to be only a repertory people can draw from. It can also be a liability and a constraint in reaching personal aspirations and achieving societal progress, inducing individuals to engage in deviant behaviour.

Households are exposed to shocks and cope with these by deploying livelihood strategies, which consist of both individual and collective components. Yet, virtually none of the reviewed studies considers the impact of people's activities on the ecological and institutional environment. There is a need for analysis at the aggregate level of communities and regions of the effects of individual (household) behaviour, as well as of the causes and effects of collective action based on collective vision. Pathway analysis provides a promising tool for such analyses (De Haan and Zoomers, 2005).

Pathway effects encompass the externalities of the behaviour of the poor as well as the wealthy. Livelihood behaviour incited by poverty conditions may increase external vulnerability, which may lead to collective awareness and action to redress this. However, the study on communal forestry management cited above (Sarin *et al.*, 2003) shows that this inevitably provokes power struggles that directly impact on people's livelihoods. The socio-economic effects of power structures form a rarely investigated topic in livelihood research. Wealthy individuals in poor regions, for instance, exercise power that is poorly documented in livelihood studies. How people become wealthy, whether their wealth benefits others or is purely exploitative in nature, can reveal dynamics that inform us of the interplay between actor and structure, the individual (household) and the group, the people and their leaders.

Cultural changes are another type of pathways effects, but, possibly as a consequence of the preoccupation of livelihood studies with tangible assets, culture has hardly featured in livelihood studies. When a mother decides that her daughter should postpone marriage to enable her to finish secondary school first, she deviates from the norm. When more people decide the same, the norm may change. The Bangladesh study cited above (Ali, 2005) shows that culture and customs do change, and that education and labour market participation of young women increase their age at marriage and strengthen their bargaining position vis-à-vis their parents and prospective in-laws. Cultural dynamics are frequently reflected in activities that may not directly generate income but yield communal benefits (digging wells, organizing meetings) or protect the environment (building terraces, forest management). Such activities are based on collective vision and reflect collective knowledge and skills. They can shed light on possible institutional or environmental constraints in different situations.

Deviant behaviour at the individual level can inspire institutional change. Individuals in an important position (a chief, elder, trader, priest, or teacher) can become role models for change. Also information on deviant behaviour of groups, rebellion and collective action can be a tool to investigate institutional change. Collective action challenges hegemonic opinions and existing arrangements, as is shown by the work of scholars like Scott (1976), which may induce changes in the external vulnerability context. While stressing the importance of collective vision and action for individual livelihoods, it also has to be noted that collective perceptions may differ by age, gender, ethnicity and religion, both within as well as across communities. By putting the linkages between the individual and the collective to the fore, we do not want to suggest a naïve conception of community. As Schoepf (2001) observes, the study of HIV/AIDS impacts on rural livelihoods has led anthropologists to argue against the reification of the idea of community and acknowledge the differences that may divide local

actors. How widely shared 'the collective' is and what the outcomes of collective action are, remains a matter of empirical investigation.

Conclusions

Livelihood studies frequently refer to vulnerability as a main feature of livelihoods in less favoured areas. Less favoured areas are defined by unfavourable conditions in terms of ecological potential, infrastructure and institutional environment, and distance to main markets and centres of innovation; elements that refer mainly to the external side of vulnerability. On the other hand, many livelihood studies tend to focus on the internal side of vulnerability. Case studies as well as surveys seek to identify how households cope with variability through socio-economic and technological responses. Major attention is given to social security networks, income diversification, and soil and water conservation techniques. The analysis of these responses tends to be inward looking; the focus is on household level dynamics rather than on aggregate dynamics and the consequences of responses for the collective.

The way the sustainable livelihoods framework is used may be the reason why the aggregate effects of individual activities are so often ignored in livelihood studies. Livelihood studies focus primarily on income activities of individuals or households. Not only is collective action glossed over, and thus the institutions and power relations involved, but also the activities that people undertake that do not generate an income. Such activities are often communal activities that have effects on and implications for the collective.

Empirical studies on livelihoods have yielded a broad insight in people's responses to vulnerability, yet the precise driving forces and the effects of these responses remain to be further investigated. This article elaborated on two biases in recent livelihood studies, namely first, towards ecological variability for explaining the external side of vulnerability, and, second, a bias towards household decision-making as the internal side of vulnerability. We argue that more attention should be given to the interfaces between the internal and external sides of vulnerability and between individual and collective responses and effects.

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