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"I don't tell my husband about vegetable sales": gender dynamics in urban agriculture in Eldoret, Kenya
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Citation

Simiyu, R. R. (2012). *"I don't tell my husband about vegetable sales": gender dynamics in urban agriculture in Eldoret, Kenya*. Leiden: African Studies Centre. Retrieved from <https://hdl.handle.net/1887/20255>

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Note: To cite this publication please use the final published version (if applicable).

“I don’t tell my husband about
vegetable sales”

African Studies Centre
African Studies Collection, vol. 46

“I don’t tell my husband about vegetable sales”

Gender dynamics in urban agriculture in
Eldoret, Kenya

Robert R. Simiyu

This research project was funded by the Netherlands Organisation for Scientific Research – WOTRO Science for Global Development (file number WB 53-355).

Published by:
African Studies Centre
P.O.Box 9555
2300 RB Leiden
The Netherlands
asc@ascleiden.nl
www.ascleiden.nl

Cover design: Heike Slingerland
Cover photo: Cattle on a road in Langas, Eldoret (Robert Simiyu)

Photos: Robert R. Simiyu.

Printed by Ipskamp Drukkers, Enschede

ISSN: 1876-018X
ISBN: 978-90-5448-121-8

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Abbreviations/acronyms

AI	Artificial Insemination
ASK	Agricultural society of Kenya
BRIDGE	(Development – Gender)
CBD	Central Business District
CBS	Central Bureau of Statistics
DfID	Department for International Development
EMC	Eldoret Municipal Council
FAO	Food and Agricultural Organization
GDP	Gross Domestic Product
GOK	Government of Kenya
ILO	International Labour Office
IMF	International Monetary Fund
MOH	Ministry of Health
MSEs	Micro and Small Enterprises
PCA	Principal Component Analysis
ROSCA	Rotating Savings and Credit Association
SADC	Southern Africa Development Community
SAPs	Structural Adjustment Programmes
SES	Socio-Economic Status
SLA	Sustainable Livelihood Approach
UNDP	United Nations Development Programme
WHO	World Health Organization

Acknowledgements

When I received a call one afternoon from Prof. Paul Omondi alluding to the possibility for me to do a PhD abroad, I was initially enthralled by the news until he mentioned the study subject: urban agriculture, what? It did not occur to me then that there was much to study and write about the subject. And I would soon realize that not many people conceptualized urban agriculture as an urban land use as such, let alone as a researchable topic worth taking me to the lands far away and to the apex of academic qualification. That the pages of this volume are about urban agriculture is testimony enough that I benefitted substantially from the insights into the subject and the support and contributions of many people, not all of whom can be mentioned individually here though.

Thanks Prof. Paul Omondi, my Kenyan supervisor, for encouraging me to take up the challenge and of course for putting in a word for me. I thank you unreservedly for your unwavering confidence in me, and for your much valued advice whenever and wherever I consulted you. I am particularly indebted immensely to Dr. Dick Foeken for giving me the PhD opportunity and for your day-to-day supervision of my work, which you did with unrivalled commitment, friendliness and interest. Your extensive and intensive knowledge of the study subject and the guidance you gave me helped me to easily settle into and feel at home with a study subject in which I had no initial interest. Most importantly I thank you sincerely for your patience and for that extra push you gave me when my personal circumstances threatened to off-track me. I must admit that sometimes the push was overwhelming, yet it is the reason I completed my work at the time I did and not later. And of course you – and your wife – went out of your way (beyond the call of duty) to make me comfortable in Holland whenever I visited and to show me around your country. And, despite his incredibly loaded schedule of engagements, my promoter, Prof. Ton Dietz, could find time to join me in the field, read through my drafts with a tooth comb, and to offer ever-incisive critiques of, and invaluable comments on my work at every stage, for which I express my sincere gratitude.

I also salute my research assistants – Jeff, Irine, Jacinta and Priscillah – for the dedication and commitment they showed in the process of generating the data that formed the basis of this thesis. And of course their efforts would have counted for nothing if it were not for the co-operation of the many respondents who volunteered information – some of whom did it over and over again – for which I am grateful. Special thanks go to Jeff for acting as my lead research assistant, a role that almost turned tragic for him on the dreadful night of 28 Febru-

ary 2008. The harrowing ‘car-jacking’ experience we encountered together that night in the line of duty will linger in my mind forever. Thanks also to Kaitano alias Museveni and fellow village elders for sparing time to guide us around Langas and for helping to build confidence among the respondents.

I have also benefitted immensely from the contributions of various institutions and other individuals. I unreservedly thank the African Studies Centre (ASC) for facilitating my PhD, for providing a stimulating research environment, and for hosting me and making my life livable whenever I visited the Netherlands. At the ASC secretariat special mention goes to Maaïke, Gitty, Joop and Jan. I also valued the interactions I had with my fellow PhDs, visiting fellows and research staff. I single out Bethuel, Peter, Blandina, Fatima, Doreen, Yinka and Owuor for mention, and especially thank André Leliveld for guiding me through some aspects of data analysis.

I also thank Moi University for granting me study leave whenever I needed it. My colleagues in the Department of Geography accorded me support and encouragement throughout my study for which I am grateful. In particular, I thank Tom Esipila for guiding me around Eldoret town during the exploratory stages of my fieldwork, Dr. Gilbert Nduru and William Kiplagat for administrative facilitation of my absence from duty, and Fredrick Okaka for running errands for me whenever need beckoned. Dr. David Wanyonyi, Dr. George Ekisa and Moses Abwire are the other colleagues at Moi University that deserve special mention for the reasons they know.

My induction into the PhD programme at CERES Research School for Resource Studies for Development as a member of the 2007 cohort was greatly stimulating. Among my fellow PhDs, I particularly valued the friendship of Nyankweli, Latifou, Tessa, Miranda, and June.

Knowing that a PhD is a culmination of a long academic journey, I must acknowledge the early mentorship role of Dr. Ferdinand Kaddu-Mukasa. He did not only ‘discover’ and encourage me to ‘seriously’ consider an academic career when I was a third year undergraduate student, but he subsequently facilitated and supervised my masters work. Although I only reluctantly obliged his advice to embark on the academic journey, today I take pride in realizing how far I have travelled. For that I remain forever grateful to him.

Finally I am greatly indebted to my family which has been with me all the way. I am deeply grateful to my wife Mellab for her many sacrifices and for shouldering the burden of parenting during my long absences. To my sons Alvin, Khasandi and Koro, I regret the long absences but I hope that in the fullness of time it will be obvious to you that I acted in your best interest. This book is dedicated to you. I greatly appreciate the sacrifices made by my parents Jotham and Respah in laying my academic foundation. My gratitude is also due to my

brother Ken and his family for providing me with another home in Europe. Thanks also for your rootedness in our way of life: your backyard *sukuma wiki* [kales] garden in Brussels was a constant reminder of the purpose of my visits to the Netherlands. The trips you took me around Europe are fondly remembered. Following the relocation of my brother's family back to Kenya, Tom and his wife Betty effectively filled the void. Thanks for the countless times you played host to me and for your wonderful company at The Hague. Thanks Tom for the endless discussions and insights we shared about the goings-on in Kenya more generally and in particular the intrigues of Kenyan politics. Back in Nairobi, the hospitality of my brother Jamii and his wife Sussy whenever I was in transit to and from Europe deserve special compliments.

But as they say, those mentioned here are not in any way implicated for any errors of omission and commission in this book, for which I take full responsibility.

Setting the stage: Urbanization, poverty, food security, and sustainable livelihoods

Introduction

The significance of urban agriculture¹ to the livelihoods of urban households, to the well-being of individual male and female farmers, and (potentially) to the urban economy and environment in sub-Saharan Africa has gained increasing recognition in recent years. Urban agriculture has emerged as an important means of improving household food security and nutritional status, a source of complementary income and alternative employment in times of increasing economic hardships, and as a means to social and economic empowerment, especially for female farmers. And although it has been less appreciated by policy makers, the (potential) contribution of urban agriculture to the economies, environmental sustainability, and socio-political stability of urban centres has also been noted.

Yet until recently, many national governments and urban authorities viewed urban agriculture unfavourably, omitted it from urban land-use planning and restricted, even criminalized its practice through prohibitive and punitive policies, citing public health and aesthetic concerns, and the activity's supposed transitory nature and marginality to the urban economy. They perceived farming as a rural import that spoils urban beauty, an activity with little economic value to the city, and as a temporary activity that would be phased out by formal and economically productive land-uses. However, thanks to sustained advocacy of research and development practitioners, the tenacity of urban farmers, the rising urban food prices and inherent political risks, and to the realization by governments and urban authorities of the endurance of urban agriculture, the practice is fast receiv-

¹ Defined in a narrow sense, for the purposes of the present study, as the cultivation of food crops and raising of livestock within municipal boundaries. Urban agriculture and urban farming are used interchangeably in this book.

ing favourable policy attention at the global, national and city levels. Many governments and urban authorities across sub-Saharan Africa are increasingly embracing urban agriculture and formulating policies to support its development. It is expected that instituting concrete supportive and facilitative laws and policies both at the national level, but more so at the city/municipal level is an essential condition for the development of urban farming into a productive and environmentally sustainable livelihood strategy.

Despite the momentum towards pro-urban agriculture policies in sub-Saharan Africa, questions have continued to be asked by some scholars about whether urban agriculture is deserving of such policy attention and support, and whether in the first place those who practice it do actually realize the benefits commonly attributed to the activity (Webb 2011; Rakodi 1988; Ellis & Sumberg 1998). Such questions have been informed by studies that have tended to show that, for many households, urban farming makes only marginal contributions to household food and incomes (see e.g. Maxwell *et al.* 2000; van Auerbeke 2007), and by the economic logic that favours allocation of scarce resources to more productive land-uses (Ellis & Sumberg 1998). The amenability of urban agriculture to urban spatial planning is also questioned on account that it is an activity in constant flux giving way to other land uses and subsequently moving into newer spaces (*ibid*).

Critics of the ‘urban agriculture bandwagon’ further point out that laying emphasis on urban agriculture *per se* diverts attention away from a more broad-based approach to urban development problems, of which urban agriculture is just one manifestation (Rakodi 1988; Bourque 2000). Consequently, pro-urban agriculture policies are viewed as an attempt by governments and local authorities to not only transfer their responsibility for urban development to poor urban residents (Sanyal 1987, cited in Hovorka 2006), but to also lock them up into a poverty trap by failing to provide better opportunities in other sectors (Hovorka 2006; Rogerson 1998). According to this logic, the benefits of supporting urban farming should be weighed against the potential benefits of supporting alternative livelihood activities and rural food production (Rakodi 1988; Ellis & Sumberg 1998; Rogerson 1998). More specifically, the point has been made that while urban agriculture policies could enhance the urban poor’s access to food in the short term (because urban agriculture is just one of many household-level responses to food insecurity), such policies may undermine overall city-wide food security initiatives in the longer-term (Bourque 2000; Ellis & Sumberg 1998).

While the wisdom and evidence underlying pro-urban agriculture policies may remain debatable (Webb 2011; Rogerson 1998), there is growing recognition that such policies must be informed by an understanding of not only what urban agriculture promises to achieve for households or even the urban economy and environment, but also what it means for those participating in it (Hovorka 2005;

Webb 2011). Gender has been identified as an important factor in mediating urban agriculture outcomes for individuals and for their households (Hovorka 2005; Flynn 2001; Mbiba 1995). However, the role of gender in shaping the functioning of the urban agriculture system has received only tangential treatment in urban agriculture research so far (Ngome & Foeken 2012). Until recently, much research has tended to assume the notion of a gender-neutral urban farmer, focusing as they often did on the household as the unit of analysis, thereby glossing over (intra-household) gendered interests of men and women. As a result of these, gender issues were not clearly articulated in urban development programmes (Hovorka 1998; Wilbers *et al.* 2004).

With only a few exceptions (e.g. Hovorka *et al.* 2009; Hovorka 2005; Ngome & Foeken 2012), recent studies that have dealt with gender have not gone beyond highlighting the various roles and responsibilities that women play in urban farming to unravel the underlying factors responsible for the gender differentials and imbalances, and how these impact the functioning of the urban agriculture system (Hovorka 2005, 2006). And much less attention has been given to the interlinkages and tradeoffs between urban agriculture and other livelihood strategies that constitute household livelihood systems and to the opportunities and constraints that these complexes present to men and women and how they shape and are shaped by gender relations. The present study was intended as a contribution in filling this knowledge gap, and to the urban agriculture policy debate. The study highlights the role of gender dynamics in urban agriculture in Eldoret, Kenya, and explores the implications of the recent urban agriculture policy initiatives for livelihood outcomes of households and for individual men and women, but also for overall urban food security and development.

Organisation of the book

The rest of this chapter contextualizes the study within the debates of urbanization, poverty and food security, highlighting the trends in population growth and urbanization in sub-Saharan Africa and what they mean for the well-being of the growing urban populations, especially in terms of food security. It then presents the Sustainable Livelihood Approach which is adapted as an analytical framework, before discussing the concept of gendered livelihoods to which I draw to augment gender analysis. Chapter 2 presents a review of the literature on urban agriculture in sub-Saharan Africa, with particular focus on the contribution of urban farming to the well-being of farming households, individual household members, and the urban economy and environment. Literature on gender issues in urban agriculture is also reviewed and the scope of the study delineated. Chapter 3 provides background information on the study area, and describes the study methodology, analytical framework, and the study population, before reflecting

on fieldwork experiences. In Chapter 4, the vulnerability context of urban farming is discussed, focusing in particular on national and municipal-level socioeconomic and political trends and their implications for livelihood opportunities of men and women. This is followed, in Chapter 5, by a review of the national and local policy frameworks for urban agriculture, and their impact on its practice in the town. Chapter 6 examines the various urban farming and non-farming livelihood activities pursued by the farming households and their inter-linkages within the broader household livelihood systems. The level of access to, and the means by which men and women established entitlement over farming resources is the subject of Chapter 7, while Chapter 8 highlights the various benefits and outcomes that farming households and men and women derived from urban farming. Chapter 9 examines the respective roles of men and women in decision-making, and Chapter 10 highlights the gender division of labour in urban agriculture. The final chapter presents a summary of the study findings and discusses the implications for gender planning and urban agriculture policy.

Urbanization, poverty, and food insecurity

The *2009 Revision of World Urbanization Prospects* (United Nations 2010) shows that the world population is today more urban than rural. By mid 2009, an estimated 3.42 billion people lived in urban areas compared to 3.41 billion rural dwellers. The urban population is expected to grow by 84% to reach 6.3 billion or 69% of a projected world population of 9.1 billion by 2050, with over 90% of the growth occurring in the developing countries. Although it remains the least urbanized macro-region, and largely because of this, Africa has experienced the fastest urban population growth and a rapid urbanization² rate comparable only to Asia's (see Table 1.1). Africa's urban population more than doubled over two decades between 1980 and 2000, it grew at a rate of 3.3% between 2000 and 2005 and it is expected to triple by 2050. In 2009, approximately 40% of the region's population lived in urban areas. By 2050 the proportion of Africa's urban population is expected to rise to over 60% (*ibid*: 9).

These urban population growth and urbanization trends have been propelled by rural-to-urban migration, natural increase and, to a lesser extent, by reclassification of rural settlements to urban status – either due to increase in population size, downward revision of population threshold for urban settlements or urban boundary extensions. The contribution of each or a combination of any of these

² Urbanization is defined here as the increase in the proportion of a country's population living in urban areas, while urban population growth refers to the rate of change of the urban population in absolute terms (Satterthwaite 2007).

Table 1.1 Rate of urbanization and urban population growth for selected years, 1950-2050.

Region	Total population (millions)					% urban					Rate of urbanization (%)				Annual rate of urban population growth (%)			
	1950	1975	2009	2025	2050	1950	1975	2009	2025	2050	1950-1975	1975-2009	2009-2025	2025-2050	1950-1975	1975-2009	2009-2025	2025-2050
Africa	227	419	1010	1400	1998	14.4	25.7	39.6	47.2	61.6	2.32	1.26	1.10	1.07	2.44	2.59	2.04	1.42
Asia	1403	2379	4121	4773	5231	16.3	24.0	41.7	49.9	64.7	1.55	1.62	1.13	1.03	2.11	1.62	0.92	0.37
Europe	547	676	732	729	691	51.3	65.3	72.5	76.9	84.3	0.96	0.31	0.36	0.37	0.84	0.23	-0.03	-0.22
Latin America & Caribbean	167	323	582	670	729	41.4	60.7	79.3	83.8	88.8	1.54	0.78	0.34	0.23	2.64	1.73	0.87	0.34
Northern America	172	242	348	398	448	63.9	73.8	81.9	85.7	90.1	0.58	0.30	0.28	0.20	1.38	1.07	0.83	0.48
Oceania	13	21	35	43	51	62.0	71.5	70.2	70.8	74.8	0.57	-0.05	0.05	0.22	2.03	1.49	1.15	0.76

Source: *World population prospects: The 2009 revision*. New York: United Nations, Department of Economic and Social Affairs, Population Division.

processes in urban population growth and urbanization has varied across the continent, between urban centres and over time,¹ just as have the rates and trends of urban population growth and urbanization. Obudho & Obudho (1994: 60) have characterized Africa's sub-regional patterns and trends as follows: "The southern region has the highest rate of urbanization; the northern region has the longest tradition of urbanization; the western region and parts of the middle region have the longest trend of urbanization; and the eastern region is the least urbanized despite its long history of colonial urbanization". Inevitably such generalizations obscure sometimes glaring differences among some states at the sub-regional level.² Urban population growth is also generally unevenly distributed within states, being concentrated in a few large urban centres – often the state capitals – which experience higher rates of growth compared to medium-sized and small towns. Over a four-decade period leading up to 1990, the population of African state capitals grew about ten-fold – from 2.5 million to 27 million – twice as fast as the rest of the urban population which, however, grew by 60 million over the same period (Miller & Singh 1994). It should be noted that while the proportion of urban population in medium and small towns may be declining vis-à-vis large cities, these settlements nonetheless continue to accommodate high proportions of the urban population. In 2009, 58% of the urban population in Africa resided in urban settlements of fewer than half a million people (United Nations 2010).

The major concern is not so much the rate of urban growth and urbanization *per se* as the fact that many national governments and urban authorities are ill-prepared and ill-equipped to tackle the challenges associated with these demographic dynamics. They lack appropriate regional planning and urbanization policies to guide the anticipated urban growth; and where these have existed,³ they have not been matched by the necessary capacity in terms of institutions, personnel and resources to implement them (UN-Habitat 2009; Potts 2009; GoK 2007). This is despite widespread apprehension among African governments

¹ Based on a review of statistics from selected countries in sub-Saharan Africa, Miller & Singh (1994) have noted, for example, that 'about half of the migrants of sub-Saharan Africa's rapidly growing population centres come from rural areas' and that 'lifetime migration and population growth has been much more rapid in the major sub-Saharan cities than in North African cities.'

² As for example the 2009 differences in levels of urbanization between South Africa (61.2%) and Swaziland (21.4%) in the southern region; between Tunisia (66.9%) and Sudan (39.4%) in the northern region; between Cape Verde (60.4%) and Niger (17%) in the western region; between Djibouti (76.2%) and Uganda (13.1%) in the eastern region, and between Congo (61.7%) and Chad (27.1%) in the middle region (see United Nations 2010).

³ Most of such policies have focused on decongesting major cities through the introduction of other growth poles and dispersion of economic investment through decentralization programmes. But these strategies have in most part failed to stem and much less reverse the tide of urban growth (Miller & Singh 1994).

over the current patterns and trends of urban growth and urbanization.⁴ Commenting on the pace of urbanization, attendant challenges and policy and planning responses, Obudho & Obudho (1994: 61) suggest that urban policy makers and managers “have simply been unable to grasp the implications of a population that doubles every (so often)”.

Most importantly, urban economies and indeed national economies of many African countries have not expanded as fast to meet the needs of the growing urban population in terms of formal sector job creation, infrastructure development and expansion of essential services such as housing, education, health care and sanitation. Instead, during part of the recent 50 years many African economies have in most part stagnated or even declined as their (urban) populations have grown. As the population in sub-Saharan Africa was growing at 3% and the urban population at close to 5% annually during the 1980s, national economies in the region registered an average gross domestic product (GDP) growth of less than one percent, implying a considerable decline in GDP per capita; and industrial production declined by about one percent per annum over the same period (Goliber 1994). In addition, per capita food output fell by 12% between the period 1974-76 and 1984-86 in contrast to all the other regions of the world which experienced an increase in food production (Sen 1987). Thus, while urbanization has in other regions of the world been associated with economic development and improvements in standards of living and well-being – e.g. higher income and literacy levels, longer life expectancy, and reduced mortality – in sub-Saharan Africa urbanization has instead been accompanied by economic decline and high levels of deprivation and inequality in some areas and periods (Dietz & Zaal 2001). A growing population of urban dwellers lack (adequate) access to decent incomes and basic social services and amenities – water, sanitation, housing, health, education, etc. – necessary for the achievement of high standards of living and well-being (Maxwell 1999; Shaw *et al.* 1994).⁵

In the 1980s and 1990s, this situation was exacerbated by neoliberal economic policies that were implemented by developing economies of the region at the prompting of the World Bank and IMF. Most notable of these were Structural Adjustment Programmes (SAPs). Although these reforms were designed mainly to spur economic growth, stimulate agricultural productivity and improve government efficiency as well as to integrate local economies into the global econ-

⁴ In 2009, about 75% of African governments were discontented with and wished to markedly alter the spatial distribution of their populations, compared to 57% in Asia, despite comparable rates of urbanization (United Nations 2010).

⁵ In sub-Saharan Africa, the urban population living in slums is estimated at 62%, the highest proportion anywhere in the world and nearly twice that of the rest of the developing world (UN-Habitat 2009). And such populations often lack access to clean water, durable housing or adequate living space, and suffer poor sanitation (*ibid.*).

omy and improve the balance of trade, the net effect of their implementation, at least in the short term, was the increase in socio-economic hardships among populations of most affected countries with the effects being disproportionately felt in urban areas, especially by the poor (Owuor 2006; Meikle 2002; O'Connor 1991; Rakodi 2002b; Nelson 1999). The SAPs shrunk incomes and income-earning opportunities in the formal public sector through employment freeze and drove many people out of employment through retrenchment; the removal of subsidies on basic commodities including food stuffs pushed up commodity prices⁶ causing inflation that eroded real incomes and purchasing power of the urban dwellers; and the withdrawal of the state from social service sector financing (e.g. education and health) placed these services beyond reach of the poor leading, for instance, to an increase in child mortality and school drop-out rates (Nelson 1999). The loss of social safety-nets for the urban poor occasioned by the implementation of SAPs further worsened their vulnerability (Maxwell 1999; Ibrahim 1994).

With little improvements achieved in the rural sector to expand economic opportunities and make rural areas more livable and attractive, not only did many increasingly vulnerable urban dwellers stay put in the cities and towns, they have continued to be joined there by many more people escaping poverty in rural areas, leading to the phenomenon of 'urbanization of poverty'. Brockerhoff (2000: 2) has observed that, comparable to South Asia, urban growth and urbanization in sub-Saharan Africa "has been fueled less by economic dynamism than by rural poverty and continuing high fertility, a pattern likely to continue in the immediate future." Thus, hitherto considered a largely rural phenomenon (see e.g. Owusu & Yankson 2007; Maxwell *et al.* 2000; Maxwell 1999; Shaw *et al.* 1994), poverty has increasingly come to be associated with the urban scene too; it has also become the focus of academic debate and development work especially since the 1980s (Potts 2009; Maxwell *et al.* 2000; Amis 1995; Shaw *et al.* 1994). While not underplaying the prevalence and severity of rural poverty, and notwithstanding the dearth of data on poverty incidence and trends in urban areas, many scholars have pointed out that the scale and depth of urban poverty – including chronic poverty – is more widespread than is depicted by official statistics, and is most probably on the increase (Satterthwaite 2007; Naylor & Falcon 1995; Owusu & Yankson 2007; Haddad *et al.* 1999; Mitlin 2005; Devas & Korboe 2000). They also contend that whereas structural causes of urban poverty may be similar to rural poverty, the urban poor, as shall be shown in a later section of this chapter, experience poverty and deprivation differently and their vulnerability contexts are more complex and so are their survival strategies (Satter-

⁶ For instance, as a result of the withdrawal of food subsidies in Sudan starting in 1991, prices of important food items such as bread rose by up to five times the pre-austerity prices (Ibrahim 1994).

thwaite 2007). Aside from the paucity of data on poverty, the underestimation of the scale and depth of poverty in urban areas has for instance been attributed to measurement methods that are based on income/consumption poverty lines, which do not adequately capture the cost of urban living and other particularities of urban life such as overcrowding, unsanitary conditions, breakdown of social support networks, etc. that predispose urban dwellers to poverty and ill-being in a manner unknown to rural residents (Satterthwaite 2007; Haddad *et al.* 1999; Owusu & Yankson 2007).

Although many economies experienced considerable improvements between 2000 and 2009 (Dietz 2011) and urbanization trends now suggest a slower (than previously anticipated) or stagnating urban population growth across sub-Saharan Africa (United Nations 2010; Potts 2009) – with a few urban centres even experiencing population decline – these trends do not necessarily signal a lessening of urban poverty. Mostly attributed as they are to circular or return migration, associated for example with retrenched formal sector workers returning to rural areas (Beall *et al.* 1999), the downward trends in urban population growth instead point to persistent economic hardships and livelihood insecurity in urban areas (Potts 2009). In the context of an unstable macro-economic environment and global economic challenges, the sustainability of cities in general and of livelihoods of the urban poor in particular have drawn growing attention (Lynch *et al.* 2001; Floro & Swain 2010; Maxwell 1999). Many livelihood studies across Africa have documented the negative impacts of macro-economic policies on people's livelihoods and the strategies they have adopted to mitigate deteriorating economic circumstances (Oberhauser & Hanson 2007). As noted by Maxwell (1999: 1950): "People are not passive victims – within the constraints they face, people do their best to cope, to make ends meet, to protect their livelihoods, and meet their basic requirements".

Participation in the informal sector activities – including urban agriculture – has emerged as perhaps the most important survival and coping strategy for many urban residents in sub-Saharan Africa⁷ (ILO 1990 cited by Maxwell *et al.* 2000; Sardier 2003; Kyomuhendo 1999; de Haan 2000; Krüger 1994). This stems from the fact that the sector offers diverse opportunities both for wage labour and self-employment; there are few entry obstacles and regulations; education qualifications and training are not requirements for most wage employment; and many opportunities of earning a living require limited start-up capital. However, by the same token, the sector is almost everywhere saturated and risky; income levels are mostly (although not always) low, irregular and seasonal; working conditions are poor; formal social insurance is unavailable for informal sector

⁷ According to the 1990 World Bank estimates, the informal sector provided up to 75% employment opportunities in many sub-Saharan African countries (Mabogunje 1994).

workers; and exploitation and harassment are commonplace (Maxwell 1999; Garrett 2000; de Haan 2000; Krüger 1994; Ibrahim 1994; Jaiyebo 2003; Mulugeta 2009; Manda, *et al.* 2000). In other words, for many poor urban dwellers, participation in the urban informal sector, while critical for their survival, is not necessarily a way out of poverty.

Because of the high proportions of income the urban poor spend on food, food insecurity is a necessary manifestation of urban poverty (Maxwell *et al.* 2000; Maxwell 1999; Potts 1997; Floro & Swain 2010; Frayne *et al.* 2009) and inevitably one of the most immediate concerns among the urban poor. As the incidence of urban poverty has grown so has that of food insecurity.⁸ Since urban households rely on the market for most of their food needs, food prices and access to cash incomes by households are essential for urban food security (Ruel *et al.* 1998; Maxwell 1999). In this vein, food security is framed as an access and affordability or an entitlement issue rather than simply one of supply or availability. Sen's (1987: 7) observation about rural famine has resonance in the urban context too: "If a person lacks the means to acquire food, the presence of food in the market is not much consolation. To understand hunger, we have to look at people's entitlements, i.e., what commodity bundles (including food) they can make their own". It is now widely understood that whilst urban settlements may and often do have adequate food for their inhabitants at the city/municipality level, not all urban residents are able to establish entitlements over the food leading to unequal availability of food at the household level (Ruel *et al.* 1998; Garrett 2000; Frayne *et al.* 2009; Krüger 1994; Lohnert 1994).

Over and above the 'ability to pay', accessibility of food by urban households is mediated by a host of other factors such as geography, policy, politics, social differentiation, etc. which vary in importance between and within cities. Poor road infrastructure in many informal urban settlements add to the cost of transporting food in bulk to those places making food more expensive (if it ever gets there) compared to better serviced areas. Commenting on the food situation in Khartoum in the early 1990s, Bakhit (1994) notes relative abundance of bread in the inner city and its scarcity in outlying areas. He adds that government employees rather than the poor were the main beneficiaries of subsidized grains and that "allegiance to the government ideology and affectionate proximity to its functionaries" was an important criterion for eligibility to receive subsidized food items (p. 255). In the same context, Ibrahim (1994) explains that food ration-cards were provided only to people residing in officially demarcated areas and to those employed by government and large organizations. As a consequence, the more deserving poor residents of squatter settlements and informal sector work-

⁸ For instance, a 2008 food security baseline survey in 11 cities in the SADC region put the average incidence of food insecurity at 77% of the urban poor (Frayne *et al.* 2009).

ers were excluded from food rations, obliging them “to buy those basic food items for up to five times the prices paid by the better-off town inhabitants who lived in (formally) demarcated quarters” (p. 258). A reliance on daily wages and a lack of refrigeration facilities also mean that the poor buy food in smaller quantities on a daily basis making it more expensive and subjecting them to food insecurity associated with insecure and irregular incomes and price fluctuations. The situation for households that rely on rural connections for part of their food needs can also become precarious should the supply be interrupted – for example in the event of adverse weather or civil strife in rural areas.

Despite the centrality of food insecurity to urban poverty and its obvious implications for the sustainability of cities (Frayne *et al.* 2009; Naylor & Falcon 1995) however, urban food security has not received as much attention in political and policy circles in a great many cities in sub-Saharan Africa as have other manifestations of urban poverty (Maxwell 1999) such as overcrowding, urban sprawl, the growing informal sector, deteriorating infrastructure and over-stretched social amenities. Maxwell makes the point that the latter urban problems attract greater attention of national governments and urban authorities because they are more visible and of a communal nature and therefore inherent with greater political ramifications. On the other hand, in the absence of critical food shortages or sudden price increases that “affect a large number of the urban population negatively and simultaneously” to make it a political issue as happened across the continent in the 1980s,⁹ food insecurity has remained in most part a private problem that “must be dealt with at the household level” (*ibid.*: 1940). It is against this backdrop that the increasing importance of own food production by urban households through urban agriculture should be seen. The practice has widely been conceptualized as a critical component of micro-level livelihood strategies adopted by urban households to cope with dwindling incomes and rising food costs occasioned by macro-economic change. And for this reason, a sustainable livelihood (SL) approach becomes an important entry point for exploring the functioning of urban agriculture as part of a complex web of urban livelihood strategies (Rakodi 2002a; Foeken 2006). The SL approach provides analytical frameworks and concepts that are increasingly useful for examining the multiple dimensions of competing and complimentary livelihood strategies as well as intra-household relations that mediate and construct the way people integrate their livelihood sources.

⁹ Following the recent economic crisis, a few countries also experienced urban social unrest related to escalating food prices. Ngome & Foeken (2012) have counted at least five countries in West Africa alone viz. Cameroon, Burkina Faso, Cote d’Ivoire, Senegal and Mauritania. Mozambique’s capital Maputo too experienced food riots as recently as September 2010.

Sustainable livelihood approach

Since the 1990s, the sustainable livelihoods approach (SLA) has not only gained popularity in poverty and development studies in rural areas (Scoones 2009; Okali 2006; Kaag *et al.* 2004; de Haan & Zoomers 2006; Bebbington 1999; Whitehead 2002), and increasingly in urban areas as well (Moser 1998; Abdalla 2008), but has also been widely embraced by governments and international development organizations in their poverty and development work.¹⁰ As currently conceptualized, the SLA is credited to the work of Robert Chambers and others in the 1980s and 1990s that focused on how poor people in rural areas of developing countries responded to and coped with adverse situations such as floods, droughts and famines, and changes in their economic circumstances.

The appeal of the SLA has been attributed to its holistic perspective on people's livelihoods, its recognition of the role of different policy and institutional contexts as well as their micro-macro linkages in shaping people's livelihoods (Bingen 2000; Oberhauser *et al.* 2004), and above all to the fact that it puts the poor and their situated agency at the centre of development discourse and practice. This contrasts with poverty and development studies which conceptualized poverty and well-being in narrow econometric terms with emphasis on income/consumption, and poor people as passive victims of structural constraints (Kaag *et al.* 2004). Emboldened by rural participatory methodologies that routinely revealed multiple manifestations of poverty and poor people's agency in affecting their conditions through diverse actions and strategies, proponents of the SLA called attention to an understanding of poverty and well-being from the totality of poor people's lived experiences and livelihood objectives as expressed by the poor themselves (Scoones 1998; Chambers & Conway 1992). Often these included not just economic/material concerns, but non-material concerns as well.

Various organizing and analytical frameworks have emerged from the SLA, highlighting different components and how they interact and inter-relate in the process of livelihood construction. The schematic presentation of one of the most widely adapted of these frameworks comprises five components, namely: the vulnerability context; livelihood assets; policies, institutions and processes; livelihood strategies; and livelihood outcomes.¹¹

¹⁰ DfID, UNDP, FAO, Oxfam, World Bank, and CARE are among organizations that have adapted the sustainable livelihood approach as a planning tool for resource management, development programmes and poverty intervention in rural areas, in particular (Thomson 2000).

¹¹ Emphasis on different components or direction of interrelations or interpretation of concepts may vary depending on the livelihood context, disciplinary background of researchers, or policy objectives of practitioners (Moser 1998).

The vulnerability context

Vulnerability – rather than poverty which is a static concept, based as it is on income and consumption indicators ‘that are generally fixed in time’ (Moser 1998: 23) – is considered a more appropriate concept in capturing the multifaceted and dynamic circumstances of poor people’s livelihoods (Moser 1998). This is based on the premise that “poverty is a condition of insecurity rather than only a lack of wealth” and that this condition is unstable and changes over time (Meikle *et al.* 2001: 1). As elaborated by Chambers (1995: 175), vulnerability “means not lack or want but exposure (to risk, shocks and stress) ¹² and defencelessness.” He identifies two aspects of vulnerability, namely “an external side of exposure to shocks, stress and risk; and the internal side of defenselessness, meaning a lack of means to cope without damaging loss” (*ibid.*). The former is what is generally conceived of as constituting the *vulnerability context* in the SL framework and refers to the environment within which a livelihood system is embedded, which environment impinges on the livelihood system and over which individuals have limited or no control.

By definition contexts are fluid and prone to changes, which may occur over the long term (trends), suddenly over the short term (shocks), or in a cyclic manner (seasonality); they may be of an economic, political, social or ecological nature (Moser 1998). Some of these changes can be a source of insecurity or threat to the livelihoods and well-being of households or individuals, rendering them insecure. Others may be a source of opportunity for livelihood security. Vulnerability also encompasses the concepts of sensitivity and resilience, the former referring to the extent to which a livelihood system responds to and is negatively affected by external threats, shocks and stress, and the latter to the system’s ability for and ease of rebounding (Moser 1998). Both concepts relate to Chamber’s internal dimension of vulnerability and are central to any conceptualization of livelihood sustainability (Scoones 1998; Chambers & Conway 1992) and necessarily focuses attention on the means (in this case, assets) available to the poor, beginning with “what the poor have rather than what they do not have” (Moser 1998:1) and their inherent potential (Murray 2000) and agency rather than helplessness. It is generally believed that the broader and more diverse the portfolio of assets, the less vulnerable the people are likely to be and the more likely they are to achieve sustainable livelihoods (Maxwell *et al.* 2000; Moser 1998). A sustainable livelihood has been defined as follows:

¹² E.g. illness, loss of a family member, income failure, widespread violence, criminality and theft, job loss, decline in social support, increases in commodity prices, eviction, civil war and political violence, famine, environmental hazards such as flooding, economic crisis, etc. (Brons *et al.* 2005, Scoones 2009).

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base. (Scoones 1998: 5)

The SL approach recognises that the context in which individuals live bears profoundly on their livelihood goals and choices. It determines which assets they can gain access to, and gives meaning to the assets they command by presenting opportunities for or imposing constraints to the deployment of the assets in pursuit of a means of living and well-being. Besides changing over time, vulnerability contexts that define livelihood constraints and opportunities vary over space as well, for instance between rural and urban areas.

The urban vulnerability context

The vulnerability context of urban areas differs from that in rural areas in various ways – economic, socio-political and ecological. The most important distinguishing feature of the two contexts is the relatively high level of commoditization of urban life i.e. cash income is required in order to access almost all necessities of life – both food and non-food, including housing, water, fuel/energy, health care, sanitation, schooling, etc. Common goods or community resources/assets (e.g. water, fuelwood, wild food and medicines, etc.) associated with rural areas are mostly unavailable to urban inhabitants. Moreover, the urban poor tend to pay higher prices for their commodities and services not just in relation to the rural poor but also to the better-off in urban areas. The cost of living in cities has been estimated to be about 30% higher than in rural areas (Frayne *et al.* 2009). For this reason – and given the low asset ownership among the urban poor – labour becomes the most (sometimes only) important asset for the poor (Floro & Swain 2010; Moser 1998). The poor eke a living primarily by exchanging their labour for wages or by deploying it in own productive activities, the products of which are self-consumed or exchanged for cash.

Because of the primacy of labour and cash income in the livelihood strategies of the urban poor, the functioning of the labour market and commodity prices become critical determinants of the vulnerability context of urban dwellers. Failure to access an income earning opportunity and/or sudden increases in commodity prices put the survival and well-being of any poor urban resident and household at great risk. Yet this is not a distant reality for many urban residents in sub-Saharan African cities – despite cities being associated with greater economic opportunities and social amenities compared to rural areas. Unable to find decent and secure jobs in the formal sector that has stagnated or just not expanded fast enough, urban residents are pushed by the logic of survival to seek alternative opportunities in the informal sector to eke a livelihood and/or supplement their dwindling incomes.

But as was indicated in an earlier section of this chapter, the crowding in the informal sector of many urban areas in Africa has resulted into low incomes, which are irregular and seasonal, leading to an increase in cases of the employed poor (see Manda *et al.* 2000). Moreover, where poor urban residents engage in illegal activities or carry out their activities in prohibited areas or without necessary approvals, they expose themselves to risks of exploitation and harassment by state agencies (e.g. municipal authorities, the police, etc.). This may take the form of extortion, imposition of penalties, seizure or destruction of assets/stock (equipment, goods, livestock, crops, etc.) (see Ibrahim 1994; Devas & Korboe 2000; Abdalla 2008), which drive the poor further into poverty. Such are the constraints that poor urban residents have to contend with in their daily struggles to make a living. It does not help that urban areas are generally thought of as being favoured in service provision, and as having better standards of living and higher incomes compared with rural areas (Shaw *et al.* 1994). Thus, whenever a choice is to be made, for instance, between supporting urban or rural populations in times of hunger, more often the tendency is to privilege the plight of the latter (*ibid.*).

Moreover, because urban areas are highly integrated into the global economy, urban residents are more vulnerable to global economic crises and disruptions on the world market. For instance, any changes in food prices on the world market are felt almost instantaneously in urban areas but take longer to reverberate in rural areas, where the people grow most of their own food and whatever they purchase is normally from local markets with limited links to the world market (Stage *et al.* 2010). Furthermore, while such changes in food prices result into only marginal or negligible increases in the non-poor's food expenditures, which in any case constitute small proportions of their incomes, the changes can have a devastating impact on the livelihoods of the poor for whom food is by far the biggest household budget item.

Socially, the vulnerability of urban residents is compounded by social fragmentation and instability, and the absence of or weak social support networks and institutions (Meikle *et al.* 2001; Moser 1998). In particular, and because of cultural diversity in urban areas, social relations based on kinship ties that are instrumental in rural areas are less prevalent in urban areas. In circumstances characterized by intense competition to make a living and to access ever diminishing opportunities, social diversity may constitute a basis for tension and conflict; and for social exclusion for some and social advantage for others. This further impedes the formation of social capital, based as it is on relations of trust and social interaction and cooperation. With cultural diversity also comes diversity of livelihood preferences and strategies, and of the meanings attached to different livelihood assets and activities. But cultural diversity has its own upsides, including

the fact that it releases urban migrants from social structures and norms that confine them to particular roles, livelihood activities and behaviour patterns (Overå 2007), and which, as shall be discussed at length in a subsequent section, are responsible for gender inequalities in sub-Saharan African societies.

Urban areas are also associated with crime to a larger extent than rural areas. Criminal activities like theft, vandalism and robbery subject urban residents to income and asset losses at individual, household and community levels. Perception of risks associated with crime influence people's livelihood options in terms of the activities they can engage in to earn a living, where they may pursue these activities, what time of day, week, month etc. they may operate, etc.

Ecologically, the urban poor's vulnerability should be seen in terms of the conditions of the settlements they inhabit. Unable to afford decent housing, many urban poor move into crowded informal settlements without tenure security. The informal and illegal status of such settlements mean that they are poorly (if ever) provisioned with basic services – e.g. water, sanitation such as garbage collection and sewage connection, and health care. Besides, informal settlements are located mostly (although not always) on the margins of urban systems and in hazardous and dangerous locations prone to disasters and environmental and health risks (Amis 1995). Settlements located near industrial plants are, for instance, exposed to a variety of pollution-related diseases. Where informal settlements are regarded illegal, they become subject of constant official harassment and sometimes targets of government bulldozers (see e.g. Ibrahim 1994).

Livelihood assets/capitals

Broadly defined, assets can be categorized as either tangible or intangible (Chambers & Conway 1992). Tangible assets encompass resources (e.g. land, equipment, machinery) and stores (stocks of valuables such as money, food, household items) while intangible assets comprise claims and access. Claims refer to the appeals that people may make on a variety of actors – other people, social groups and networks, organisations, private and public institutions, etc. – for assistance when they are faced with adverse circumstances. Access on the other hand refers to the opportunity to actualize livelihood choices offered by resources or stores.

According to the SL framework, these assets or capitals are further categorized into five types – usually depicted as the 'asset pentagon' – namely *natural* capital (e.g. land, water, forests and soils); *financial* capital (e.g. savings, credit, loans, grants, etc.); *human* capital (e.g. level of education, skills, physical health and ability to provide labour); *physical* capital (e.g. machinery, housing, equipment, public infrastructure such as roads); and *social* capital (e.g. social networks of friends and neighbours, kinship relations, associations, community-based organizations).

While availability of assets is important, emphasis is placed on access as well (Mandel 2004; Bebbington 1999) for assets will be meaningless unless individuals and households can access and transform them to make a living. The saliency of access is especially true for public or communal assets – e.g. social infrastructures such as schools and health facilities, public land, water for irrigation, credit institutions, etc. – which individuals or households cannot command individual ownership of. Yet, as shall become apparent in subsequent sections, unequal power relations between, and differences in capabilities among household members make the question of access a pertinent one at the household level as well. Bebbington (1999: 2022) considers access as “perhaps the most critical resource of all” in the process of making a living. The concept of access closely relates to Sen’s concept of entitlements: “the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces” (Sen 1984, quoted in Leach *et al.* 1999: 232). People attain entitlements by transforming their endowments (i.e. ‘initial ownership’ of resources and stores) through ‘entitlement mappings’¹³ (*ibid.*).

Moreover, assets should not be conceived of as if they are unrelated to or function independent of each other (Chambers & Conway 1992). On the contrary, they are connected in manifold ways and the process of making a living involves deploying different types of assets in varied combinations, and tradeoffs between individual and various combinations of assets. As has already been stated, the relative meaning and value attached to each of these assets or a combination of them are embedded in context and vary among individuals and households depending, among other things, on their capabilities, interests and livelihood goals. Asset profiles of individuals and households also change over time as different assets are, to varying degrees, transformed, depleted, replaced, and gained.

Whereas stocks of natural assets such as land, forests, etc. are critical to rural livelihoods (Scoones 1998; Meikle *et al.* 2001), they may not be as important within urban contexts; but this will also vary within each of those sectors and will depend on livelihood objectives, options and strategies. For instance, although land as an asset in livelihood construction for poor urban households has generally been considered less significant (Rakodi 2002a; Mandel 2004), it is no doubt the primary capital asset for urban farming households. Another illustration of contextual influences on the value and meaning of assets is Moser’s (1998) asset vulnerability framework which treats housing as a stand-alone capital asset rather than subsuming it under the rubric of physical assets. She notes

¹³ For example, an individual may exchange his/her labour (endowment/initial ownership) for a wage (entitlement); in this case the exchange entitlement mapping will comprise the wage rate per time worked or amount of work done.

that ownership of a house is more than just a basic need for household consumption; it can also be converted into an important productive asset by renting out and/or using it for home-based enterprises (see also Kellett & Tipple 2000).

Social capital is considered a particularly critical asset for the poor. It is an important means of spreading and minimizing risk, and of accessing other assets essential for making a living. Kaag *et al.* (2004: 59) consider social capital as underpinning a social security perspective on livelihoods when they argue that:

(...) social isolation – not a (temporary) decline in income – is the greatest threat to livelihoods. What makes the difference between being vulnerable or not is access to systems of redistribution. In other words a lack of social relations and social networks accounts for the vulnerability of poor people.

In the absence of formal social security, making claims on their social relations for support in times of adversity is an important survival strategy for the poor. The more there are informal civic groups, social networks and relations of solidarity, reciprocity and mutual aid in an area, it is assumed, the greater the 'stock' of social capital available to individuals and to the community at large. Such a communitarian view of social capital is predicated on the existence of a strong sense of community and solidarity among community members and presumes that the outcomes of such social networks and social relations are beneficial to all. On the contrary, not all individuals benefit equally from social relations and for some individuals, social obligations towards others within the networks may actually put their own livelihoods at greater risk. Moreover, often individuals, especially in urban areas, find themselves in communities with disparate social networks and groupings, some of which are exclusivist, antagonistic or criminal and therefore derive benefits for some members of the community to the exclusion and at the expense of others (Woolcock & Narayan 2000). Individuals make the most of social capital where, in addition to strong social networks and relations within their own particularistic communities, there also exist certain levels of networking between communities that transcend social differentiation and sectarian divisions (*ibid.*).

Livelihood strategies

How much people succeed in withstanding external shocks and stresses and regenerating, sustaining or improving their livelihoods depends on the portfolio of activities they can and actually do pursue by drawing on the portfolio of assets they command. Often assets are deployed and managed in multiple and diverse ways and combinations, involving complex decision-making processes informed by perceptions of risks and opportunities associated with different livelihood options, which risks and opportunities are determined by the context. In these respect, people's capabilities are key to the success or failure of livelihood strate-

gies in achieving desired livelihood outcomes. Beyond being just human capital and people's ability to use assets to make a living, capability has been conceived of as also incorporating the meanings that assets give to individuals' worlds and how these meanings in turn shape subsequent livelihood choices (Bebbington 1999). It also encompasses the role of assets in empowering individuals 'to be and to act', and to transform the world around them, including institutional and structural constraints to their well-being (*ibid.*). Sen (1999:87) defines a person's capabilities in terms of "the substantive freedoms he or she enjoys to lead the kind of life he or she has reason to value".

Diversification of livelihood activities has been identified in livelihood literature as one of the most important livelihood strategies for poor households whether in rural areas (Scoones 1998; Whitehead 2002; Kaag *et al.* 2004), and certainly in urban areas as well (Meikle *et al.* 2001). Conceptually, diversification encompasses the portfolio of livelihood activities and options and the multiplicity of locations where these are pursued. Thanks to globalization processes, people's livelihood strategies have become increasingly complex, multi-dimensional and multi-local, straddling diverse economic, ecological, social and political contexts that obtain at multiple, often interlocking, socio-spatial scales – from the micro-level (household) through to the meso-level (community) and up to the macro-level (wider national community and beyond) (Kaag *et al.* 2004; de Haan & Zoomers 2006; Rakodi 2002a; Mandel 2004; Oberhauser & Hanson 2007). This has been captured by de Haan & Zoomers (2006: 122) thus: "today's livelihoods are based on a range of assets, income opportunities, and product and labour markets which are located in different places and interact in turn with other places, meaning that livelihoods both depend on global forces and shape them".

Since people's and households' vulnerability contexts are fluid and dynamic – and, as a consequence, so do their asset profiles, endowments, claims and entitlements change over time – livelihood strategies aimed at securing sustainable livelihood outcomes must of necessity be adaptable and dynamic. The notions of livelihood adaptability and dynamism have led some scholars to question the appropriateness of the term strategies in capturing poor people's day-to-day livelihood struggles, preferring instead the term 'pathways' (Kaag *et al.* 2004). In contention is the notion of economic rationality implied by the term strategies. It is argued that poor people's circumstances cannot afford them the luxury to make contingent plans for dealing with shocks and stresses beforehand; rather that theirs is reactive agency centred on daily (hand-to-mouth) survival. The contrary view holds that even under difficult circumstances, the poor often exhibit proactive agency: they do not simply react to changing circumstances but also take strategic decisions to secure their livelihoods in the long run (Chambers & Conway 1992; Whitehead 2002; Dekker 2004). This is captured by Dekker (2004:

1739) when, in reference to households' responses to common risks in rural Zimbabwe, she asserts that "households (...) do not just sit back and wait to see how an adverse event affects their opportunity to generate income or compels them to reduce their consumption when income is low. (...) they have developed various strategies to deal with these risks, strategies that are part of their livelihood system".

Livelihood outcomes

People pursue livelihood strategies with the aim of achieving multiple livelihood goals and outcomes (Thomson 2000; de Haan & Zoomers 2006; Maxwell *et al.* 2000; Chambers & Conway 1992; Meikle *et al.* 2001). Livelihood goals may range from coping with and adapting to changing circumstances to 'get by' in the short run, maintaining a certain level of household well-being, to improving the capacity of the livelihood system to withstand external shocks and reduce the risk of the household well-being declining in the future.

Besides the material outcomes necessary to cope with and adapt to changing circumstances – e.g. improvements in income levels, access to nutrition and food, and improvements in the asset base, etc. – people also draw on the assets they command to achieve a broader range of longer-term socio-political well-being outcomes such as self-esteem, identity, dignity, social relations and status, and personal fulfillment. When applied to women's circumstances, these two types of outcomes in essence constitute what in gender planning have come to be referred to, respectively, as practical and strategic gender interests (Moser 1989; Hovorka 2006).

Gender planning is a planning approach that aims to capture and incorporate men's and women's needs and interests into development policy interventions with a view to delivering equitable development outcomes for men and women, and to ultimately empower women (Moser 1989; Wieringa 1998). The approach is informed by the premises on gender differences in the context of livelihood construction (see below), and especially the recognition that gender inequalities characterized by women's subordination are deeply embedded in the social structure that enforces unequal social relations between men and women (Moser 1989; Wieringa 1998). One of the widely applied approaches to women's empowerment in gender planning – which has been popularized by Moser (1989) – is the distinction between practical and strategic gender needs/interests.

Practical gender needs are those needs that derive from women's experiences related to their gender roles; they "are usually a response to an immediate perceived necessity which is identified by women within a specific context", and give rise to practical gender interests which primarily focus on survival rather than challenging social structures responsible for their subordination (Moser

1989: 1803). On the other hand, strategic gender needs refer to “those needs which are formulated from the *analysis of women’s subordination to men*”, and which focus on achieving “an alternative, more equal and satisfactory organization of society than that which exists at present, in terms of both the structure and nature of relationships between men and women” (*ibid.*: 1803).

Policies, institutions and processes

The various policies, institutions and processes – both formal (e.g. laws, regulations and policies in public or private sector) and informal (e.g. cultural structures and social norms and ideologies) – that govern people’s everyday lives are a critical influence on their livelihoods. They mediate conditions under which individuals may or may not access certain assets and/or pursue certain livelihood strategies and options (Oberhauser *et al.* 2004). In other words, institutional structures are an integral part of, rather than distinct from the vulnerability context. It should be pointed out that power relations and politics inevitably underpin issues of entitlements and access to resources and opportunities and are therefore by extension embedded in policy and institutional structures. Accordingly, Scoones (1998: 12) has written thus:

Institutions (are) often fluid and ambiguous, and usually subject to multiple interpretations by different actors. Power relations are imbedded within institutional forms, making contestation over institutional practices, rules and norms always important. Institutions are also dynamic, continually being shaped and reshaped over time. They are thus part of a process of social negotiation, rather than fixed ‘objects’ or ‘bounded social systems’.

If people’s livelihoods are being constructed in diverse contexts and at multiple interlinked social and geographical scales, so too must policies, institutions and processes relevant to their livelihoods be understood as similarly operating in diverse contexts and intersecting at multiple scales. They “operate from the household to the international arena” (Rakodi 2002a: 16) and “across the public and private (...) sectors” (Meikle 2002: 37). The intersections of livelihood strategies and policies and institutions mean that changes occurring at any scale bear on the totality of the individual’s micro-context for making a living, and that emerging micro-level livelihood strategies may in turn impact the macro-meso-level policies and institutions.

Emphasis on the importance of policy and institutional arrangements and their cross-scale (macro-micro) linkages in shaping people’s livelihoods has been touted as one of the strong points of the SLA. “Because it provides a means to link macro-level processes to micro-level outcomes and responses”, Oberhauser *et al.* (2004: 206) notes, “a livelihoods approach provides us with a view into how people are coping with or adapting to economic restructuring in all its complexity.” In the wake of neoliberal socio-economic restructuring in developing

economies in the 1980s and 1990s, many livelihood studies have focused on the negative impacts of macro-economic policies on people's livelihood opportunities and the coping strategies the people have adopted at the micro-level and how these have in the process shaped the dynamics of macro-economic change (Oberhauser & Hanson 2007). However, questions about power relations and politics embedded within the policy and institutional structures within which people make a living have remained tangential to such studies (Scoones 2009; Murray 2000). At the household level – which continues to form an important focus of many livelihood studies¹⁴ – gendered power relations defined by social norms and gender ideologies embedded within the social structure are of particular significance to household livelihoods (Okali 2006), and certainly to urban agriculture, as are formal policies and institutional structures.

Gendered livelihoods

The concept of gendered livelihoods is anchored on the notion that gender is an important mediating factor in the process of securing livelihoods at the household level. It is based on a set of premises: a) men and women play different but complementary roles within their households and in the community – and because of this – they have different, sometimes conflicting, needs, preferences and livelihood goals and options (Little 1987; Oberhauser *et al.* 2004; Hapke & Ayyan-keril 2004; Kalabamu *et al.* 2005; Bless 2005; Moser 1989; de Haan & Zoomers 2003; Okali 2006); b) men and women experience poverty differently and unequally (Baden 1999); c) the social norms that ascribe statuses and roles to men and women enforce unequal power relations between the sexes thereby presenting them with different opportunities and constraints in their pursuit of livelihood strategies to meet their collective and individual needs (Bradshaw 2002; Amis 1995; Blackden & Canagarajah 2003; Mandel 2004); d) men and women benefit from and are affected by livelihood outcomes differently (BRIDGE 2001); e) gendered power relations are constructed and operate at various hierarchical contexts (household, neighbourhood, community, nation) (Kalabamu *et al.* 2005); f) owing to the dominance of patriarchy in sub-Saharan Africa, gender relations favour men over women (Blackden & Canagarajah 2003; Bradshaw 2002); and (g) the resulting power asymmetry invariably manifests itself in gender patterns of endowments and entitlements, division of labour and responsibility, decision-making, and gender division of space (Blackden & Canagarajah 2003; Apusigah 2009). I elaborate these below.

¹⁴ A focus on poor people's lived experiences and daily struggles necessarily pays attention to the local level of action – at the community, but invariably more so at the household level (de Haan & Zoomers 2006; Chambers & Conway 1992).

In many sub-Saharan African communities, men and women traditionally assume specific and distinct gender identities and statuses, and clear boundaries exist as to which responsibilities and roles men and women should assume and which tasks/activities they may perform within the household context¹⁵ and in the community (Chipeta 2005; Gwebu 2005; Nabulo *et al.* 2009). Men traditionally occupy higher social statuses as household heads and breadwinners for their households, and as the main decision-makers and community leaders. On the other hand, women are subordinate to and are therefore expected to defer to the authority of men and their role is restricted to the domestic sphere as care givers and home-keepers. It is these socially constructed gender identities and roles that underpin gender inequalities and shape men's and women's livelihood options and strategies and how they benefit from livelihood outcomes.

Compared to men, women have been shown to command limited ownership of, access to and control over property and productive assets. In many sub-Saharan African communities, gender ideologies and social norms deny women the right to equal inheritance of property such as land, the most important signifier of wealth and basis of livelihood construction in the predominantly agricultural-based economies of the region. In Nigeria, less than 20% of women own land and only about half of them have access to agricultural inputs, and less than 5% can access credit to improve their farmlands (Adepoju 2004). Ellis *et al.* (2007) report that in Kenya, farms operated by female-headed households own less than half of the capital equipment found on farms of male-headed households, and receive only 1% of agricultural credit. Only 7% of women own land in Uganda's Kampala city (Kiguli *et al.* 2003).

Women are also disadvantaged in accessing educational and training opportunities necessary for building human capital, enhancing capabilities and improving competitiveness in the job market. "In general, when the cost of education increases at the household level, families tend to prefer schooling for the boys (...) Women's lower education levels result in their lower formal labour force participation, as well as (...) lower levels of skills for women entrepreneurs" (Ellis *et al.* 2007). Their limited participation in the formal labour force is in any case concentrated in lower rungs. Women's lower education achievements also lead to lower productivity and financial returns which perpetuates women's dependency on and subordination to men. Aside from formal education, it has also been established, for example, that female farmers in Africa receive less than 10% of agricultural extension services (see *ibid.*). Added to their limited access

¹⁵ Nabulo *et al.* (2009) have pointed out that in Uganda "housekeeping, child care, nursing the sick, cooking food, and housework are a woman's responsibilities. Cooking food, for example, is culturally unacceptable for a married man" (p. 86-87). This description reverberates across most African communities.

to land and capital equipment, it is therefore no wonder that productivity per unit area would be lower on farms managed by women compared to those managed by men (Saito *et al.* 1994).

Besides being underrepresented in the formal employment sector because of their relatively low levels of education and training, women also encounter discriminatory employment and remuneration policies. They face greater difficulties than men in securing employment even when they have comparable qualifications and are generally more likely to receive lower pay for equal work.

Although formal institutions – laws and policies – have been put in place in many countries to redress gender imbalances, gender inequality has persisted in many places and the entrenched informal discriminatory gender ideologies and social norms have tended to endure. For instance, patriarchal customary law systems that exclude women from property ownership still prevail in most Kenyan communities despite the existence of statutory laws that recognize women's property rights. As Ellis *et al.* (2007: 5) have observed:

The extent to which discriminatory customary law overrides largely non-discriminatory statute law in relation to women's property rights has been a major source of judicial determination and is still an uncertain area of law. But for most women, the formal legal position is irrelevant in practice. For them justice is dispensed at the local level, without recourse to the formal courts, and customary norms apply.

Moreover, even where social structures bestow ownership rights to women, such ownership of assets does not necessarily guarantee their control over the same – and this is not restricted to patriarchal societies alone. Ishengoma (2004: 54) has observed that among some matrilineal communities in Tanzania where women enjoy greater ownership and access to resources, “the overall overseer of those resources was male: the maternal uncle.”

Because of their lesser asset portfolios and entitlements, women generally have limited livelihood options, tend to engage in livelihood activities on a smaller scale, and their livelihood strategies are, to a large extent, reliant on the support, and subject to the whims of men. Men's superior social status and socially constructed masculine identity also mean that they exercise authority over women at the household level and make and enforce decisions about what women can or cannot do or be, including how women should deploy their own labour and benefit from it. Given the differences in preferences between men and women, the manner in which and by whom decisions are made matters for household and individual outcomes (see Nitish 2004; Angel-Urdinola & Wodon 2010; Mkenda-Mugittu 2003).

Women's gender identities as home-keepers and care givers – and the reproductive activities and responsibilities they entail – confine them to the domestic space, which is socially constructed as ‘feminine’. The implication of this is that men do not normally help out with domestic chores and that if women should

participate in productive livelihood activities then such activities are usually undertaken within or in closer proximity of the home and relate to their domestic responsibilities. Generally women spend long working hours on reproductive responsibilities that are neither remunerated nor valued¹⁶ leaving them with little time and flexibility to participate in market-based remunerative opportunities, and much less to recreate (Bardasi & Wodon 2009; Blackden & Canagarajah 2003). Women's participation in such activities whether within the home or outside of it therefore exacerbates their time poverty and come with great costs to their personal well-being, and sometimes, with social stigma. For instance, on average, women in Uganda work for 15 hours compared to 10-12 for men per day; their Kenyan counterparts work 13 hours to men's 8 hours; and women's average weekly working time in Cameroon is twice more than men's (64 hours versus 32) (see Blackden & Canagarajah 2003). In some cases where women have been unable to juggle between their domestic responsibilities and livelihood activities, they have had to sacrifice their livelihood sources (see Gwebu 2005).

Despite the importance of market-based livelihood activities for women and the critical role of mobility in enhancing market access and profitability (Mandel 2004; Mwaipopo 2000), with a few exceptions such as in parts of West Africa (Overå 2007; Mandel 2004; Schultz 2004), participating in the market place, especially in activities that require great spatial mobility is generally considered inappropriate for women and those who take up such activities and 'roam about' do so at the risk of being ostracized. As such some (prospective) women entrepreneurs are forced to trade-off business opportunities for social respectability (Schultz 2004). In contrast, because of their superior endowments and entitlements, men tend to have greater livelihood opportunities, and dominate high-status and high-income livelihood activities, and enjoy greater economic autonomy. Moreover, as breadwinners and community leaders, men enjoy greater freedom to venture outdoor and to participate in market economies and community activities. As such they dominate the public space which affords them greater opportunities for networking and for accessing 'valued knowledge' and information including market information necessary for appropriating opportunities in market-based economies.

Women's supposed altruistic nature rooted in their gendered identities and confinement to the domestic sphere have also been advanced to explain their relative vulnerability. Their care-giving responsibilities expose women to direct experience of poverty and are often compelled to do whatever it takes for the sake of their children and other people under their care whenever household live-

¹⁶ For instance, it is estimated that in developing countries about 66% of female activities – compared to only 24% of male activities – are not captured by the Systems of National Accounts (Blackden & Canagarajah 2003).

lihoods come under threat such as during times of economic crisis or, for married women, when their husbands lose their sources of livelihood. Not only are women known to work longer hours, to take up multiple livelihood activities and to gear benefits thereof towards family sustenance, they may also engage in acts of self-sacrifice and take up low status and sometimes degrading (e.g. borrowing and begging) and potentially risky (e.g. prostitution) livelihood activities. In contrast, men are known to privilege personal interests and to spend their incomes on personal needs as they wish (Bennett 2005; Agarwal 1997; Hapke & Ayyankaril 2004; Ibrahim 1994). Moreover, operating outside the home most of the time and therefore removed from the direct experience of the material realities of their households, men are not as pressured to make sacrifices and compromise their social status and self-pride for the sake of family well-being when their traditional livelihood sources collapse. As Overå (2007: 556) has pointed out from his study in Accra (Ghana) “they (men) do not experience the same immediate burden of taking care of children. If they are not able to support them, they don’t”. Instead, men often respond to their loss of traditional livelihood sources and failure to provide for their households with a sense of redundancy, frustration and anger, and may even desert their families, an option that is not available for women (Narayan *et al.* 1999). Zack-Williams’ (1995) study of the experience of austerity measures in Sierra Leone found out that “women are the ones who tradition expects to make sacrifices” and that “[T]hey tend to go without food to help the family only after children have been fed do women feel they can have their meal” (p. 59-60).

With some exceptions (see e.g. Hapke & Ayyankaril 2004; Overå 2007), studies have also shown a tendency among women to diversify their livelihood activities more than men (see, for instance, Whitehead 2002, cited by Oberhauser & Hanson 2007; Kabeer n.d.; Mudimu 1996), the consequence of which is an increase in the work burden and time constraints for women. This has been observed in many urban settings across sub-Saharan Africa especially following economic hardships of the 1980s and 1990s that accompanied the implementation of economic structural reforms and which pushed many men out of their traditional income-earning opportunities (see Chipeta 2005; Narayan *et al.* 1999). And because education is a major entry requirement into the job market in urban areas compared to rural areas and into formal compared to the informal sector, for a lack of comparable levels of education to those of men, women’s livelihood activities are concentrated in the informal sector, including urban farming. As has already been observed, such activities are mostly of small-scale, low-income, low-status, risky and of a seasonal and survivalist nature, more so for women who lack apprenticeship skills and access to financial capital (Mulugeta 2009; Otunga *et al.* 2001; Nyakaana 1997). It is estimated that among non-agricultural

workers in sub-Saharan Africa, a higher proportion of women (over 84%) than men (63%) participate in the informal sector (Blackden & Canagarajah 2003). Where women were already well represented in the informal labour market as in parts of West Africa, the entry of more women as well as men in the sector meant, as Overå (2007: 542) notes in the case of Ghana, that the incomes of informal sector women “are reduced and that they can rely on male support to an even lesser degree than before”. Many studies from across sub-Saharan Africa have concluded that women and children were the hardest hit by the economic crisis and the SAPs (Adepoju 2004; Galli & Funk 1995; Iyun 1995; Zack-Williams 1995; Malatzi 1995). If the dwindling of incomes on the part of male providers increased the burden on women to provide for their families, the withdrawal of the state from social sector provisioning and from welfare programmes could only worsen women’s circumstances.

The concept of ‘feminization of poverty’

It is for the foregoing reasons that poverty has been portrayed as a phenomenon that, aside from urbanizing, is increasingly feminizing. Introduced in the 1970s (BRIDGE 2001; Angeles 2009), the concept of ‘feminization of poverty’ was popularized by feminist scholars and, until recently, became an influential, almost ‘uncontested orthodoxy’ in gender and development scholarship as well as poverty intervention work (Angeles 2009; Baden 1999). The concept was based on three supposedly self-evident premises: a) that women across the globe are overrepresented among the poor; b) that their poverty is deepening relative to men’s, and c) that the rising number of female-headed households, considered as some of the ‘poorest of the poor’, is both a manifestation and a result of a ‘feminization of poverty’ (Chant 2007; Angeles 2009; Baden 1999; BRIDGE 2001). While in some instances empirical evidence and hard statistics have been adduced in support of these propositions (Chant 2009; Adem 2002 cited in Mulugeta 2009; Adepoju 2004), on the most part claims of a feminization of poverty have largely been unsubstantiated (Mulugeta 2009; Adepoju 2004; Jaiyebo 2003; Amis 1995). Recently the central propositions that underpin this once-uncontested truism have begun to be challenged (e.g. Chant 2007; Angeles 2009).

Conceptually, critics have, for instance, questioned the characterization of female-headed households as some of the ‘poorest of the poor’, pointing out that female-headed households’ lived experiences and realities are more complex and that they are not always or everywhere poorer than male-headed households, nor can they be assumed to be a homogenous group (Angeles 2009; Chant 2007; van Vuuren 2003; Razavi 1999). Rather, that the socio-economic situation of female-headed households and their experience of poverty are shaped by an intersection of various factors such as marital status, age, social networks, life course, ethnic-

ity, class, endowments, and social norms and gender ideologies, which need to be taken into account in understanding the poverty situation of female-headed households (Bradshaw 2002; Moser 1989). And that female-headship may in some instances by itself lead to better livelihood outcomes and well-being for women and other household members (van Vuuren 2003; Baden 1999). As elaborated by Baden (1999: 13),

(...) the processes which lead women to head households are many and in some cases this may represent a positive choice, so that the connotations of powerlessness and victimhood are inappropriate. In female headed households women often have greater autonomy and control over resources. Well-being outcomes for women and children in these households may be better than in male-headed households at the same level and income.

It has also been argued that intervention programmes based on the assumption that poverty is a largely feminine problem and which therefore focus on alleviating women's poverty situations and increasing women's access to productive resources tend not only "to simply increase women's burdens and/or perpetuate the status quo", but also to by-pass equally and sometimes more deserving poor male-headed households (Angeles 2009: 294).

But perhaps it is the narrowness of the income and consumption perspective of poverty underpinning the feminization of poverty thesis that has been the major point of contention, with critics arguing that such a perspective does not capture the multidimensional character of poverty, the existing inequalities in access and control of resources between men and women and much less, women's daily struggles and changing life course circumstances (Chant 2007; Angeles 2009; Bradshaw 2002). However, cognizant that women's increased access to productive resources may not necessarily translate into gender equality, enhanced role in decision-making or personal well-being for women, attention has been drawn to gender relations and power asymmetry at the household level that underline women's vulnerability, and mediate their experience of deprivation and pursuit of well-being relative to men. In the final analysis, even critics of the 'feminization of poverty' hypothesis agree, as Baden & Milward (1995, referred to by Baden 1999) have pointed out, that whereas women may not always and everywhere be worse-off than their male counterparts, "because of the weaker basis of their entitlements, they are generally more vulnerable and, once poor, may have less options in terms of escape".

Agency and the gendering of livelihoods

However, several studies have also shown that while cultural practices and norms continue to shape men's and women's lived experiences and livelihood strategies at the micro-level, they do not impact all men and women equally across time and space (Mandel 2004; Kalabamu *et al.* 2005; Nyancham-Okemwa 2000; Chipeta 2005; Narayan *et al.* 1999; Hapke & Ayyankaril 2004; Mwaipopo 2000).

Rather, their impact reflects an interplay of various factors including the structure of the local economy and attendant economic realities, formal (policies and legislations) and informal (social norms) institutions, and individuals' endowments and entitlements as well as personal characteristics, including those referred to above in relation to female household heads.

Mandel (2004) shows how mobility – an important aspect in the livelihood strategies pursued by women entrepreneurs in Porto Novo (Benin) – varied both between and among Goun and Yoruba women owing to differences in gender ideologies between the two ethnic groups as well as differences in class and life-course circumstances of the women. She notes, for example, that “[W]hile Goun women at every stage in the life-course may have limited mobility (...) Some women overcome these limits either by virtue of their class or by choosing to ignore social conventions associated with particular gender roles at various stages in the life-course” (p. 272). Older women and single women have also been known to enjoy greater mobility, economic autonomy and decision-making power (Hapke & Ayyanketil 2004; Mwaipopo 2000). Chipeta (2005: 48) has shown that, compared to older folks, younger men and women in Malawi's Blantyre city had a higher propensity to share both domestic and public spaces and the roles associated thereof, concluding that “there is likely to be changes of attitude to strict gender roles with increased education opportunity and exposure”.

Sardier (2003) has pointed out two important aspects of women's life in the city that shape their livelihood strategies in a manner that may challenge traditional gender roles and reconfigure gender relations. The first is that, compared to rural women, city women generally spend less time on household chores, due for example, to the relatively easy availability of water and energy sources as well as other social amenities and services – i.e. they do not walk long distances to fetch water and firewood or to access health services as is often the case in rural areas. The implication of this is that urban women experience less time constraints than their rural counterparts (see Bardasi & Wodon 2009) and have a little more time to engage in productive livelihood activities. The second is that access to these amenities in urban centres is dependent on availability of cash income. Thus, where their spouses' income is not enough to sustain the household (as is often the case), women increasingly come under pressure to also look for remunerative opportunities outside the home as has been outlined above. As a consequence of this, women have become more visible in the public space and increasingly come to assume the ‘breadwinner’ role for their households thereby challenging the gender division of space – i.e. the private/domestic sphere as feminine and the public arena as masculine – and the gender identity of men as breadwinners. Increasingly such ‘transgressions’ against social norms and gender ideologies by women, if done out of necessity and desperation to fulfil their reproductive re-

sponsibilities when men can no longer provide for their families, are tolerated, even encouraged and supported, and, as Overå's (2007) study in Accra (Ghana) showed, may even draw admiration and respect. It must be mentioned that some West African urban areas (e.g. in Ghana and Nigeria) have a long history of rich market women.

Whilst social norms and narratives tend to restrict livelihood options for men to a greater extent, men too are increasingly being pushed by economic circumstances to take up roles and livelihood activities that had hitherto been associated with the female gender both outside the home and within it (Overå 2007; Mwaipopo 2000; Narayan *et al.* 1999; Chipeta 2005). Granted, this may be greeted with a measure of ridicule by the society and a sense of embarrassment and loss of status for those involved (Overå 2007). However, sometimes it is tolerated if undertaken against a backdrop of harsh economic realities and a lack of alternative livelihood options especially in urban settings. Besides, in comparison to the rural setting, stigmatisation for men involved in 'women' activities is less prevalent within the urban milieu since "the majority of the men who enter 'female' domains in the informal economy have migrated, and therefore perform their new roles out of sight of kin, mates and elders of their home town" (Overå 2007: 559). Nonetheless, in order to gain greater acceptability and justify their involvement in 'female activities', men have in certain instances transformed, re-interpreted and recast such activities to conform to masculine conceptions and cultural expectations of themselves as well as to their livelihood goals and personal expectations. For instance, although women traditionally dominated the informal food marketing sector in Accra (Ghana), Overå's (2007: 558) study established that more younger men were increasingly taking up operations in fast-food stands (locally known as check-check) that not only "operate late into the night, which is considered risky for women", but also incorporated "more 'modern' types of food". The tendency for men to take over, co-opt or associate themselves with women's livelihood sources once they grow in scale and/or become (more) profitable and therefore important livelihood sources for their households has also been documented (Bennett 2005; Narayan *et al.* 1999; Toriro 2009).

Studies have also documented how women in diverse contexts have, in certain instances and when it suits their circumstances, tended to exploit gender ideologies to protect their social space as a strategy of advancing their livelihood goals and interests and/or of challenging and negotiating gender norms. Mwaipopo (2000) has demonstrated how women in the Tanzanian village of Saadani resisted the government's presumably well-intentioned attempt to mobilize them into fishing – a major local and more profitable livelihood activity traditionally dominated by men – by promoting equal access for men and women to fishing grounds and equipment as a means of bridging the gender gap in participation in

local production processes. This programme raised women's acceptance in fishing and held greater prospects for enhanced incomes for women. However, women resisted this move because, in their view, it would not only transform their gender identities and increase their work burden – since men were not equally encouraged to share in domestic responsibilities – but it would also “reduce their traditional ability to control an independent (albeit lower) income” (p. 81). This illustrates the multi-dimensional nature of livelihoods and, in particular, the gendered meanings attached to different livelihood strategies and social spaces for livelihood construction as well as gender conceptions of power. As Mwaipopo (2000: 81) has pointed out,

(...) by assuming that women would attain (social and economic power) through participating in what was locally defined as the dominant arena of power, the programme failed to recognize that women themselves did not need to subscribe to a kind of power that was identified as men's. Women demanded to express and pursue their own individual discourses and practices of power.

Overall, the livelihood strategies adopted by men and women reflect intra-household and extra-household processes whereby gender relations and traditional social norms and gender identities and roles are being constantly challenged, negotiated, renegotiated, and even contested, both actively and subtly as individuals and households strive to make a living under deteriorating economic circumstances. Yet, in certain instances, the processes by which this proceeds entrench and reinforce the same norms (Oberhauser & Pratt 2004; Narayan *et al.* 1999). How these dynamics play out in urban agriculture in Eldoret, Kenya, is central to the present study.

Urban agriculture in sub-Saharan Africa: State of knowledge and the present study

This chapter provides an overview of the state of knowledge on various aspects of urban agriculture in the sub-Saharan African context. It focuses on the significance of urban agriculture for household livelihoods, and for the urban economy and environment. It also illuminates the diverse ways in which various national governments and urban authorities have responded to urban agriculture in terms of policy, and in practice. The chapter then highlights the various constraints that urban farmers encounter in the process of trying to earn a living, before reviewing key gender issues in urban agriculture. It ends by delineating the scope of the present study.

Importance of urban agriculture

Urban agriculture and household livelihoods

Many studies have cast urban residents' decision to farm in town as an important informal sector survival strategy¹ aimed at enhancing household food security and nutritional status as well as generating some household income in the context of dwindling incomes and rising food costs (Drakakis-Smith *et al.* 1995; Simatele & Binns 2008; Mbiba 1995; Obosu-Mensah 1999; Page 2002; Maxwell *et al.* 1998; Mudimu 1996; Dennery 1996; Flynn 2001). Although urban farming has always been an integral part of the urban landscape, economy and food system for as long as urban settlements have existed (see for example, Simatele & Binns 2008; Obosu-Mensah 1999), its practice surged and its importance became

¹ As an approach to urban economic analysis generally, the survival strategy perspective can be traced back to the early 1970s and has since been used widely in illuminating the strategic livelihood decisions that people, especially the poor, make in response to – and in a desperate attempt to survive – deteriorating economic circumstances (Owusu 2007).

widely recognized only in recent years, especially since the 1980s following growing economic hardships immediately preceding and further exacerbated by SAPs (Drakakis-Smith *et al.* 1995; Simatele & Binns 2008; Mbiba 1995; Obosu-Mensah 1999; Page 2002; Maxwell *et al.* 1998; Maxwell 1995; Mudimu 1996; Bryld 2003). Drakakis-Smith *et al.* (1995: 183) have gone so far as to suggest that “it is not possible to examine the current growth and nature of cultivation or animal husbandry in any African city without first discussing the economic and social background of the structural adjustment programmes”.

Urban agriculture has been found to be of particular importance for the urban poor, who rely more on cash incomes to purchase food items (Bryld 2003; Maxwell *et al.* 2000) and for whom food expenditures take up relatively large proportions of their incomes, which are in any case irregular. The proportions have ranged from 40-60% in Nairobi (Freeman 1993), to over 70% among one-fifth of the population in Accra (Maxwell *et al.* 2000), and to upwards of 80% among some households in Dar es Salaam (Mlozi 1997) and 90% in Zambia’s Copper Belt area (Steckley & Muleba 2003). In the circumstances, own food production insulates poor households against adverse food insecurity and malnutrition when their incomes are no longer forthcoming (Maxwell *et al.* 1998). Maxwell (1995) found out that farming households in Kampala (Uganda) spent up to two times less on food than non-farming households, and Foeken (2006) has reported better nutritional status among young children of farming households compared to those of non-farming households. The finding by Nabulo *et al.* (2009: 87) from their Kampala study that “37 percent of farmers would have no food if prevented from growing food” further illustrates the value of urban farming for the poor.

Besides, any savings that may result from own food production by poor households often constitute a significant proportion of their household incomes (Freeman 1993). The savings enable them to purchase other foodstuffs they do not produce, to diversify their diet (Bryld 2003; Foeken 2006; Dennery 1996; Lynch *et al.* 2001) and to attend to other non-food household needs and social obligations (Page 2002; Obosu-Mensah 1999; Lynch *et al.* 2001; Dennery 1996) such as paying school fees, rent, as well as medical, water and energy bills, etc. In fact for some households, such savings (or indirect income) are more important than receiving direct income (Foeken 2006; Dennery 1996). For its significance to the survival of poor urban households and given the stiff competition urban agriculture faces from other more profitable land-uses manifested in shrinking urban space for farming (Zalle *et al.* 2003; Brock & Foeken 2006; Lynch *et al.* 2001; Dennery 1996), many researchers have advocated its promotion, as Lynch *et al.* (2001: 169) would put it, “if merely on the basis of equity”.

The ‘survivalist’ characterization of low-income farmers’ urban agriculture enterprises is best captured by Freeman (1991: 110) when he says of the situation

of urban farmers in Nairobi (Kenya) thus: “The vast majority of urban cultivators, both male and female, are very poor, landless, subsistence dwellers for whom their little *shamba* may mean the difference between a precarious but continued existence in the city and a full-blown family catastrophe.” Kiguli *et al.* (2003: 11) have described urban farming in Kampala as “an initiative to lessen the growing poverty”, while urban residents who took up farming on part-time basis in Kano (Nigeria) pointed out that “they too rely on their production to survive, since their monthly salaries could hardly sustain them for longer than fifteen days” (Lynch *et al.* 2001: 166). That urban farming is critical to the survival of such urban dwellers has been underlined by their tendency to knowingly cultivate urban spaces with obvious precarious tenure rights, and to undertake farming in defiance of municipal authorities despite the implied risks of doing so (e.g. crop destruction and eviction by land owners without compensation). The importance of the survival motive as a factor in urban agriculture is further underscored by the fact that many poor households cultivate basic food crops for home consumption and more so that urban residents who had previously cultivated non-staples in the period preceding economic hardships have had to switch to staples once economic hardships set in. Page (2002: 49) has for instance illustrated how residents of Buea (Cameroon), changed from “fruits and vegetables chosen because of their taste” to staple food crops after the implementation of SAPs.

But to conceptualize urban agriculture as a pure survival strategy onto which people cling just to get by during precarious economic times and for want of better income-earning opportunities is to miss the point that although many studies have shown urban agriculture to be more or less dominated by the poor (Mougeot 2000; Mbiba 1995), many other studies have also indicated that middle and high income groups are no less represented (Obosu-Mensah 1999; Maxwell *et al.* 1998; Kiguli *et al.* 2003; Mudimu 1996) and are sometimes even over-represented (Flynn 2001; Foeken 2006; Mkwambisi *et al.* 2010). Indeed, it is now well known that in fact the entry into urban agriculture by those who stand to benefit the most from it – i.e. the poorest of the poor – is the most constrained (Rakodi 1988; Mbiba 1995; Simatele & Binns 2008; Drakakis-Smith *et al.* 1995; Flynn 2001; Mougeot 2000). They lack access to productive resources such as land, capital and inputs, and social networks and political influence to leverage such access. Simatele & Binns (2008) report, for instance, that 46% of the respondents in Lusaka (Zambia) cited poverty as the main reason for their limited or non-participation in urban farming.

Motives of middle and high income groups in urban agriculture cannot be confined to the survival imperative. These groups engage in urban farming as a means of diversifying and subsidizing income as well as securing and sustaining their family well-being (Foeken 2006; Bryld 2003). They also do so to access

fresh produce and for ornamental and recreational reasons (Page 2002; Thornton 2008; Ngome & Foeken 2012). Moreover, undertaken as an agri-business as some high-income households do, urban agriculture can constitute an important accumulation strategy (Bryld 2003; Lynch *et al.* 2001) and generate incomes comparable to or even better than those accruing to some senior formal sector employment (Simatele & Binns 2008).²

Moreover, important as it has been for many urban households (see for instance, Mkwambisi *et al.* 2010; Nabulo *et al.* 2009), for many households too, urban farming caters for only a small portion of household income and food requirements. Maxwell and others (2000) found out that urban food production accounted for no more than 1% of household food consumption in Accra (Ghana), and that even for households that engaged in urban farming, self-produced food accounted for only about 7% of household food consumption (see also Mbiba 2000; Maxwell *et al.* 1998).

The survival perspective of urban agriculture also fails to account for the evidence that suggests that some of those who engage in the practice may continue doing so even if their economic conditions were to improve (Obosu-Mensah 1999). This implies that economic reasons may not be the only or even the most important determinants of people's choice to engage in urban farming (Foeken 2006). Obosu-Mensah (1999) has proposed a cultural lag model whose central hypothesis is that in their selection of livelihood activities in the informal sector, individuals are guided by their familiarity with the activities and the skills and experience they have, which are mediated to a great extent by the individuals' cultural backgrounds. In the particular case of urban agriculture, individuals would more likely take up farming if they had a background in the particular farming activities and if they find space to do so (see also Tinsley 2003; Dennerly 1996). By the same account, the choice of farming activities (crops to cultivate and livestock to keep) as well as the household division of labour might similarly be explained. Obosu-Mensah's thesis was based, in part, on his findings that 30% of farming households in Accra had been farming in smaller towns before migrating to the city. Research findings elsewhere also seem to vindicate the cultural imperative. Flynn (2001) notes the absence of Asians from urban farming in Mwanza, which she explains in terms of their traditional non-participation in agriculture in East Africa, while Mlozi (1997) found out that approximately half of the livestock in Dar es Salaam belonged to a cluster of ethnic groups that kept them because of their 'cultural utility.' Similar reasons were advanced by 44% of livestock keepers in South Africa's Grahamstown urban settlement (Thornton 2008).

² It is also noteworthy that as urban authorities extend their city/municipal boundaries, there is a tendency for such extensions to include some already profitable commercial farms.

Moreover, confining motives of urban households to the cultural imperative is to assume that cultural values are static and that the urban context is not differentiated from its rural opposite. As was described in Chapter 1, the urban environment bears certain dynamics that shape people's livelihoods and social relations underlying reproductive and productive activities in ways that are somewhat distinct from what obtains in rural areas.

What is less in doubt from the proceeding discussion though is that urban farming derives multiple livelihood outcomes for urban farmers at the household level. The following section highlights the importance of urban farming at the city/municipality level.

Urban agriculture and the urban economy and environment

While the contribution of urban farming to the household economy and food security has increasingly become recognized, its contribution to the urban economy has been less appreciated. Many urban planners and city authorities view urban agriculture as an activity of only marginal value to the urban economy (Bryld 2003), and as a transitional urban landuse that would sooner give way to more legitimate and productive landuses (Foeken 2005). This perception largely relates to the fact that urban farming is undertaken predominantly for subsistence, which makes a quantification of its contribution to the urban economy a difficult undertaking (Memon & Lee-Smith 1993; Bryld 2003).

However, various studies and anecdotes point to urban agriculture's significance to the urban well-being. For instance, Smit *et al.* (1996) estimated for Dar es Salaam that 61% of urban families were involved in urban farming by 1991, making it the most important employer after petty trade. In 1998, urban farming provided part-time and full-time employment to an estimated 13,000 people constituting about 9% of Nakuru town's labour force and supplied about 8% of the total energy requirements of the entire population of the town "at lower than normal market price" (Foeken 2006). Ssebaana (2002; cited in Kiguli *et al.* 2003) reports that 60% of Kampala's population consumes at least one urban agriculture crop or animal product and that urban agriculture supplies 70% of the city's poultry products (Kiguli *et al.* 2003).

In regards to urban environment, many urban authorities have for long perceived agriculture as belonging solely in the rural areas (Bryld 2003) and therefore incompatible with and detrimental to the urban environment. It was seen as an activity that spoils the beauty of the urban landscape, which is ostensibly meant for residential, commercial, industrial and formal income-earning activities (Simatele & Binns 2008; Mlozi 1997; Kiguli *et al.* 2003) and as one that is fraught with public health risks. Livestock keeping is associated with transmission of diseases, nuisance, bad smell, and safety threats to pedestrians as well as

destruction of urban green gardens and infrastructure. Urban crop cultivation is also believed to pose health risks associated with the use of untreated waste water and sewage as well as heavy metal concentration in crops grown on contaminated soils and exposed to industrial pollution and motor vehicle exhaust fumes. Crops also supposedly provide breeding grounds for disease-causing vectors such as mosquitoes. Excessive use of chemical fertilizers and insecticides and cultivation along river banks are considered causes of environmental degradation, while tall crops supposedly provide hideouts for thugs thereby contributing to urban insecurity.

While some of these environmental concerns have been echoed by some researchers, the overall picture remains less than clear-cut, owing to limited research on environmental impacts of urban agriculture (Foeken 2006; Lynch *et al.* 2001). Basing on a cursory observation of farming activities in Dar es Salaam, Mlozi (1997: 116) has noted that “the problem of environmental degradation caused by urban agriculture is great.” Flynn (2001) has similarly pointed out environmental problems associated with urban farming in Mwanza, ranging from land degradation, soil erosion, to the contamination of Lake Victoria by chemicals and animal waste; while Simatele & Binns (2008) have reported a possible association between cholera and dysentery prevalence in parts of Lusaka to urban farmers’ use of untreated sewage on their plots.

On the other hand, although Pasquini’s (2006) study of health and environmental risks associated with the use of refuse ash in urban vegetable production in Jos (Nigeria) revealed much higher concentration levels of heavy metals (e.g. Lead and Cadmium) in the vegetables than those recommended by WHO/FAO, the results were inconclusive as to whether the contamination was directly linked to the use of town refuse ash on plots. Elsewhere, laboratory analysis of soil samples and crops irrigated with sewage water in Nakuru (Kenya) also detected high concentration levels of heavy metals (in some instances also surpassing WHO/FAO recommended levels) (Foeken 2006). However, it is pointed out that this did not necessarily “pose a serious health threat for people consuming those plants” (*ibid.*: 121). Similarly Nyamari & Simiyu’s (2007) laboratory tests on kidney and liver tissues from animals slaughtered in Kenya’s Eldoret town showed higher concentration levels of heavy metals (lead and cadmium) in animals originating in urban areas compared to those from rural areas. However, the concentration levels fell below maximum tolerable levels recommended by WHO/FAO and therefore did not pose any health risks to consumers. Nyamari & Simiyu caution though, that “there is potential of heavy metals accumulating along the food chain, thereby posing health risk to meat consumers depending on the rate of exposure” (p. 105).

Thus more research on environmental and public health issues is required and ways found to mitigate any risks in order to make urban farming safer and sustainable (Pasquini 2006; Lynch *et al.* 2001). The premise is that not only do the benefits accruing to urban farmers and (potentially) to the urban environment from urban agriculture far outweigh the health and environmental risks, but that most of the risks are manageable (Mougeot 2000). Urban agriculture's potential for ecological renewal and environmental sustainability through urban greening, recycling of organic waste, clearing of bushes that would otherwise provide shelter for rodents and thieves, and reclamation of unproductive, smelly and dangerous dumpsites into productivity has, for instance, been cited (Pasquini 2006; Brock & Foeken 2006).

Brock & Foeken (2006) have also shown how bush clearance for urban crop cultivation removed the potential of open spaces being put to informal uses such as squatting and human waste disposal and in the process prevented the pollution of nearby water sources and how it also enhanced the aesthetics of the urban landscape in affluent areas of Cotonou (Benin) by bringing the beautiful ocean frontage in open view. They also show urban agriculture's potential for conserving marshlands which serve as important natural water reservoirs. Study findings by Lynch *et al.* (2001: 169) from Kano (Nigeria) also highlighted the potential of urban agriculture in mitigating the impact of seasonal flooding on neighbouring built-up areas.

Policy and institutional settings for urban agriculture

Despite its benefits to urban households and (potential) contribution to urban economy and ecology, many urban authorities across sub-Saharan Africa have continued to harp onto colonial urban laws and policies and to invoke public health, environmental and aesthetic concerns to omit urban farming from urban land-use planning, and to restrict its practice. Sometimes urban authorities have resorted to outright repression of urban agriculture, for example, by slashing farmers' crops without compensation (see Kiguli *et al.* 2003; Mudimu 1996; Dennerly 1996; Toriro 2009) and harassing livestock keepers (Poynter & Fielding 2000)

However, notwithstanding official restrictions and repression, urban agriculture has remained a common feature of the urban landscape of many sub-Saharan African cities. This is partly as a consequence of farmers' conscious defiance of by-laws (Mlozi 1997; Mbiba 1995; Simatele & Binns 2008; Mudimu 1996), which in a way underscores the significance of the practice to the urban farmers. It is also as a result of the involvement of powerful individuals including government officers in urban agriculture, which makes it difficult for urban authorities to enforce their by-laws (Mlozi 1997; Obosu-Mensah 1999). As Mlozi

(2003) has noted in a Tanzanian urban context, “[T]he fact that there are many senior government and ruling party officials among the livestock keepers who break the by-laws with impunity, is probably the best assurance for most other livestock keepers that they will not be punished for breaking the law.” Similarly, Mbiba (1995) has reported that those seeking elective positions in Harare are compelled by political expediency to take sides with and to avoid jeopardizing the interests of urban farmers, who constitute a substantial electoral constituency. Indeed, in some cases, as in Mwanza (Flynn 2001), the participation of powerful individuals in urban farming can provide the necessary leverage for promoting the activity and thrusting it up the policy agenda.

The nature of many production sites also explains urban agriculture’s endurance in the urban landscapes of sub-Saharan Africa against predictions to the contrary. Apprehensions about the future of farming in urban areas have been predicated on restrictive legal settings and, most importantly, the stiff competition from other more profitable and ‘legitimate’ land uses. The reprieve for urban agriculture comes from the fact that many spaces that are cultivated by urban dwellers are not suitable for other land-uses and developments because of their locations, terrain and ecological vulnerability. Official designations of, and development restrictions in some spaces may also leave farming as the only viable land-use. Brock & Foeken (2006: 575) have concluded from their study of horticultural production in Cotonou, Benin, that

(...) certainly in developing countries, UA (urban agriculture) may well often be the most appropriate way of using certain tracts of land. Examples include; (i) locations too close to major traffic flows to allow habitation or other constructions, for example, roadside verges, areas next to railroad tracks and those close to airports (despite the possible air pollution these are prime locations for ornamental plants among others); (ii) hazard-prone areas or ecologically vulnerable locations (in Cotonou especially the swamps, which experience seasonal flooding, and the coastline); and (iii) locations where squatting and unauthorized growth are particularly unwelcome, for example, the most expensive residential areas, tourist sites, government and business locations and, possibly, coconut plantations.

But it is perhaps the economic hardships of the 1980s and 1990s – and which have persisted since – that most profoundly affirmed the permanence of urban farming in sub-Saharan Africa’s urban areas. In appreciation of the negative impacts of SAPs on urban dwellers’ livelihoods, but also because of the political implications of potential urban unrest due to deteriorating economic conditions, many governments and city authorities relaxed their restrictions on urban farming (Kiguli *et al.* 2003; Mlozi 2003; Mlozi 1997; Drakakis-Smith *et al.* 1995; Page 2002). This was done either tacitly through non-enforcement of by-laws and official toleration as in Buea (Page 2002), or overtly by reviewing constraining legislations and policies and/or enacting enabling ones (see van Beek & Rutt 2007; Pasquini 2006; Kiguli *et al.* 2003; Mougeot 2000). In other urban settings,

urban residents were publicly encouraged to produce their own food as in Tanzania (Mlozi 1997), Ghana (Obosu-Mensah 1999), and, more recently, Kampala (van Beek & Rutt 2007). Indeed, in many countries such policies seem to have achieved desirable political outcomes as depicted by Page (2002: 42) in the Cameroonian context:

(...) urban agriculture absorbed the dissatisfaction of citizens whose standards of living fell rapidly during the implementation of structural adjustment policies (...). The anger that resulted from salary cuts was absorbed by producing an increased proportion of domestic food requirement on nearby land.

Such is a clear testimony as to the significance of urban farming not only to the urban economy but to the national economy and political stability as well.

Overall, the emerging trend in many countries and urban authorities is that of official attitudes softening towards urban farming. However, whereas positive steps have continued to be taken by governments and urban authorities across sub-Saharan Africa towards legalizing and planning for urban farming³, the overall picture of policy and legal contexts within which urban farming takes place in sub-Saharan Africa remains mixed, so is that of the impact of such contexts on the choice and practice of urban farming as a livelihood strategy. Many urban authorities have procrastinated in translating national pro-urban agriculture rhetoric, legislation and policies at the local level, while outright prohibitive laws and policies remain in place in others. In other instances, implementation of the policies and legislation for the actual support and promotion of urban agriculture has fallen short of expectations. In the case of Malawi's Blantyre and Lilongwe towns, provision for urban agriculture within the national legislation has not been matched by supportive policies and regulations to spur urban food production (Mkwambisi *et al.* 2010). Writing about the situation in a Tanzanian urban context, Mlozi (2003) also laments the persistence of legislative restrictions against urban agriculture at the municipal level despite the national government's favourable policies and promotional campaigns for urban agriculture.

In an important way this demonstrates how external shocks and threats to household livelihoods are responded to by households and interpreted differently by different actors at multiple scales and how an interplay of policies, institutions and processes obtaining at these scales interrelate to shape individuals' vulnerability contexts and livelihood opportunities and strategies. On the other hand, the various policy responses mentioned above – ranging from official toleration to crafting of pro-urban agriculture legislations and policies – illustrate how livelihood response strategies adopted at the micro-level may in turn impact the

³ This has been the case, for example, in Nakuru (Kenya), Accra (Ghana), Dar es Salaam and Dodoma (Tanzania), Kampala (Uganda), Doala (Ivory Coast), Kinshasa (Democratic Republic of the Congo), Maputo (Mozambique) and various cities in South Africa (see Foeken 2006; Mougeot 2000; van Beek & Rutt 2007; Pasquini 2006; Kiguli *et al.* 2003; Thornton 2008).

meso/macro policies, institutions and processes. In this particular case, the impact of macro-economic neoliberal policies (crafted at the national level but initiated by global institutions viz. World Bank and IMF) are felt directly at the micro-level (by individuals and households through job losses, increase in food and commodity prices), and the livelihood strategies (urban agriculture) adopted by individuals and households (at the micro-level) to mitigate the economic impact are at first prohibited and repressed by urban authorities (at the meso-level). However, following urban residents' persistence with farming despite the restrictions, and advocacy and lobbying by researchers and development organizations, national governments institute policies and mechanisms to legitimate and support urban farming, which are however adopted to varying degrees by municipal authorities.

Other constraints to urban agriculture

Besides the restrictive and repressive policy and institutional contexts referred to above, urban farmers encounter other constraints as well. Access to land – the primary asset for farming – has been identified as one of the major constraints to urban farming. Competition from other more profitable and legitimate land uses has led to shrinkage of farm lands in many cities across sub-Saharan Africa. In Bamako (Mali), Zalle *et al.* (2003: 13) note the difficulty of finding vacant lands for cultivation, which they attribute to a trend among landowners to prefer constructing houses for rental purposes “which is more profitable and less risky than agriculture”. Brock & Foeken (2006: 564-565) recount the disappearance of horticulture from Cotonou's (Benin) main market grounds where it once flourished “to make way for new housing areas and extensions to the markets”, and from school gardens “due to land pressure and the expansion of schools”.

Access to land is especially a major constraint for the poor and less powerful who cannot afford the high cost of land in the urban areas and lack the necessary leverage over urban authorities to secure access to public land. Thus urban farmers convert any available open space for farming, whether they have legal rights over it or not. Besides backyard gardens, such spaces have been identified in a wide range of other locations such as under power lines, on road reserves, along river banks, around industrial areas and dumpsites, along and between railway lines, in the middle of roundabouts, around airports, institutional lands, near sewerage installations, etc. (Simatele & Binns 2008; Nyamari & Simiyu 2007).

Regardless of the location, the plots the poor are able to access are generally small in size and uneconomical, and often unproductive and sometimes hazardous. Moreover, these are sites with insecure tenure, exposing urban farmers to the risk of eviction, harassment and crop destruction. Kiguli *et al.* (2003) report that

Uganda's Electricity Board routinely slashes crops found growing under power lines in Kampala. Similarly, when previously undeveloped land cultivated by poor urban farmers in Kano (Nigeria) (Lynch *et al.* 2001) and in Nairobi (Kenya) (Dennerly 1996) changed ownership from government agencies to private land developers, some farmers had their crops destroyed by agents of the new landlords without notice or compensation. To insulate their livelihoods and avert the risk of losing their crops, some farmers in Kano resorted to establishing co-operative relationships with landowners or, as was also the case in Nairobi, to spreading the risk by cultivating multiple plots belonging to different landlords hoping the different landlords would not embark on developing the plots simultaneously. Such farmers also avoid cultivating perennial, long maturing crops and are generally not motivated enough to make long-term investments on 'their' plots to enhance productivity.

Yet with all the inherent and demonstrated risks, not only do farmers continue seeking out and cultivating plots with obvious insecure tenure and that are potentially health threatening – for which they are prepared to pay and even purchase (Dennerly 1996; Mudimu 1996) – but such plots are also not easy to access. More so for the new immigrants who lack necessary information about available farming spaces and the necessary social connections to access such spaces and who, as a result, encounter the problem of 'gate-keeping' from earlier immigrants. It is for this reason that the majority of urban farmers tend to be people who have resided in town for a considerable period of time (Flynn 2001; Mbiba 1995; Obosu-Mensah 1999; Mougeot 2000) and who have come to know their way around town, and developed networks that help them to identify and access potential farming spaces. The situation in Nairobi's Lang'ata area, as recounted by Dennerly (1996: 194), is illustrative of the instrumentality of social capital in accessing the agricultural land resource:

The situation is considerably more complicated and risky for those seeking a plot for the first time. Who one knows becomes crucial to obtaining a plot. Individuals who do not have the appropriate social ties are shut out of food production altogether. Long-established producers know what gifts they must give to secure the use of an additional plot (...) Such producers also know who is the 'real' user of the plot and do not risk losing money or crops to temporary occupants. A potential producer will probably experience some difficulty obtaining land. He or she is unlikely to have extensive contact with established producers unless the producer is already a friend, relative or neighbor (...) Sharing a common ethnic affiliation or living or working in the same place can also facilitate securing access to land (...) producers who have plots in Langata will be more inclined to pass them on to either a relative or a co-ethnic they know well rather than a stranger.

Access to clean and reliable water for irrigation is another constraint to urban farming. Irrigation is essential for continuous crop cultivation and animal watering, and improved yields; especially because many urban centres experience seasonality and even intra-seasonal variability in rainfall patterns. The ease with

which water can be accessed is an important factor determining which crops can be grown (Lynch *et al.* 2001) and the scale of production as well as men's and women's levels of participation (Hope *et al.* 2009). Yet natural water sources are rare in urban centres – and those available such as rivers and shallow wells are usually heavily polluted – while tap water is expensive and in some urban centres its use for irrigation is outlawed. And investing in water projects on plots with insecure tenure is not a rational option. This leaves many farmers with rainwater as the only option, which limits their activities to particular seasons and exposes them to the risk of drought and crop failure (as was the case, for example, in Nakuru in 1999; Foeken 2006). But for some the urgency to continuously earn income compels them to use polluted river water, untreated sewage or waste water on their plots (see Dennery 1996; Simatele & Binns 2008) with serious consequences for personal and public health. In this case, the farmers trade off their health-related well-being for immediate food and income-related livelihood outcomes.

Many studies have also pointed to a lack of financial capital among poor urban farmers as a major impediment to urban agriculture. The precarious tenure rights in the land they cultivate exclude them from the possibility of using it as collateral to access credit (see Lynch *et al.* 2001; Hope *et al.* 2009). Farmers require financial capital in order to access productive resources such as inputs (e.g. fertilizers both chemical and inorganic, pesticides, certified seeds and improved breeds, etc.) and labour, to invest in agricultural technologies appropriate for the urban environment, and to secure their plots. As a result of a lack of capital, many urban farmers are excluded from more profitable urban agriculture enterprises that require high capital investment; they record low productivity; and lose crops and animals to diseases and theft.

Urban farmers also lack access to extension services or technical support, especially where urban farming is considered illegitimate or carried out in prohibited spaces (Foeken & Mwangi 2000; Hope *et al.* 2009). Where urban agriculture is legitimate, a lack of understanding of urban farming systems on the part of extension service providers become a limiting factor (Kiguli *et al.* 2003). In other cases, farmers also miss out on technical support because they do not know about its existence, lack time to seek it or due to general illiteracy coupled with a lack of customization of extension services to the needs and comprehension levels of producers (Thornton 2008; Toriro 2009).

The foregoing problems and constraints to urban agriculture have been exacerbated by poor organization and networking among urban farmers in many African urban areas. Studies have shown that where farmers' organizations exist (see Brock & Foeken 2006; Hope *et al.* 2009), they play a critical role in enabling farmers to access land, in marketing their produce, in negotiating with municipal

authorities for a variety of support services and concessions, in securing farm inputs at affordable rates through collective bargaining, and in accessing technical and new farming techniques and information for their members.

Thus achieving productive and sustainable urban farming requires more than policy rhetoric and change of attitude. It calls for concrete supportive and facilitative policies and programmes, especially at the city/municipal level. This would constitute an important incentive for farmers to invest in urban farming, and also attract outside resources, innovations, and technologies to mitigate farmers' constraints and improve productivity and environmental sustainability. The importance of urban agriculture-friendly laws and policies for ecological improvement has, for instance, been demonstrated in Kampala, where urban agriculture promotional campaigns were accompanied with waste recycling programmes leading to increased environmental awareness and waste recycling and re-use (van Beek & Rutt 2007). However, in light of the discussion in Chapter 1 that highlighted the differential opportunities and constraints between men and women in their efforts to make a living, it becomes imperative for any policy initiative to be based on a clear understanding of gender issues specific to urban agriculture for it to resonate with individual social actors in urban agriculture.

Gender and urban agriculture

Gender has long been recognized as a major factor that shapes urban agriculture and one that begs analysis if the functioning of the urban agriculture system is to be better understood (see for example Flynn 2001; Mbiba 1995; Hovorka 2005; Foeken 2006). However, only a few studies have recently heeded this call (Ngome & Foeken 2012; Hovorka 2005) and the findings thus far remain only indicative.⁴ Hovorka *et al.* (2009) have highlighted 'key gender issues' which underline gender differences and inequalities in urban agriculture, namely: women's predominance in urban agriculture; division of labour; gender differences in knowledge/preferences; access to and control of resources; decision-making power; and benefits and challenges.

Generally urban agriculture has been described as a woman's activity on the basis that most of the urban farmers are women, especially in eastern and southern African cities (Mbiba 1995; Freeman 1991, 1993; Maxwell 1995; Mudimu 1996). Even in West Africa where studies have indicated that men dominate urban farming (e.g. Obosu-Mensah 1999; Lynch *et al.* 2001), this latter characterization seems to be truer in respect to open-space farming than home-gardening where women are well represented and in some instances out-number men. For

⁴ For examples of urban agriculture studies that have focused specifically on gender issues, see Wilbers *et al.* (2004), Hovorka (2005), Hovorka *et al.* (2009) and Ngome & Foeken (2012).

instance, Obosu-Mensah (1999) observed that more women than men were involved in home-gardening in Accra (Ghana) and that where only one spouse in a household was the gardener, it was always the wife. In a way, this validates the widely held view that women dominate subsistence farming (Rakodi 1988).

The dominance of women in urban agriculture – and indeed in the informal sector more generally (Tinsley 2003; Sardier 2003) – and their presumed subsistence motive have been explained and rationalized variously (Freeman 1993; Mudimu 1996; Dennery 1996; Hovorka *et al.* 2009). They have been attributed to women's comparatively low levels of education and lack of professional or other skills to effectively compete with the relatively more educated and skillful men for formal employment. This leaves women to settle for less paying informal income-generating activities, among which is urban agriculture. In particular, cultural expectations of women related to their traditional reproductive roles are popular explanations of women's motives and high participation levels in farming. For instance, Dennery found out from her study of urban agriculture in Nairobi that "[W]omen see food production as part of their duty in feeding the family" (Dennery 1996: 196). The general replication of the traditional division of roles in urban agriculture has been explained similarly, emphasizing home consumption and income earning as the primary motives for women and men, respectively (Flynn 2001; Mbiba 1995; Rakodi 1988; Obosu-Mensah 1999; Freeman 1993; Kiguli *et al.* 2003; Ngome & Foeken 2012).

It is argued that because of their responsibility for household food preparation, childcare and home keeping, in the context of economic hardships and dwindling household incomes, women easily turn to farming in order to meet some household food needs, diversify the diet and generate extra income to meet other household obligations. This is partly because of their supposed altruistic nature, and partly because they can easily juggle between the various domestic chores and farming tasks (Bryld 2003; Mougeot 2000; Jacobi *et al.* 2000) especially where they can access land within a short distance of the homestead and where agricultural activities and products can be integrated into their other income-generating activities. Consequently women are involved more with staple crops and vegetables (Freeman 1993; Foeken 2006; Kiguli *et al.* 2003) and dominate home gardens or backyard farming. In contrast, men have tended to take more interest in crops and animals with high income value (Ngome & Foeken 2011) and a ready market and to dominate off-plot or open space farming. In terms of livestock production, women concern themselves more with small livestock while men keep large livestock. This has informed suggestions that urban agriculture dominated by women holds greater prospects for household well-being than that controlled by men (Jacobi *et al.* 2000). It should be noted however, that while women's participation in urban agriculture has primarily been driven by

the subsistence motive, for many women, and especially female household heads, any sale of surplus produce ends up constituting a major (sometimes the only) source of income (Nabulo *et al.* 2009). In the circumstances, urban agriculture provides an important alternative employment for women.

Gender differences have also been documented in terms of division of labour. Studies have indicated that most labour requirements in urban agriculture are provided by women. Female labour is particularly critical among low income farming households who cannot afford hired labour (Flynn 2001: 684; Maxwell *et al.* 1998: 415). Obosu-Mensah (1999) observes that if men are involved in other ‘outdoor’ activities, their role in urban agriculture may be limited to a supervisory one but that the converse is not tenable in the case of women. In conforming to traditional power relations, women have to alternate between their ‘outdoor’ activities, normal household chores and tending their gardens “because a supervisory role (for them) at home may lead to conflicts between them and their husbands” (*ibid.*: 150). The upshot is that women generally spend more time on work both inside and outside the home than men. For instance, Sardier (2003) estimated that women in Bamako spend 121 hours per week to men’s 87. In Harare, women were found to spend about five or six hours daily on farming activities at the peak of farming seasons while men assisted only occasionally, mostly “during the weekends and for limited time periods” (Mudimu 1996: 190). To be sure, men sometimes spend longer hours than women in agricultural fields – largely as a result of the often labour-intensive, if profitable, agricultural enterprises they engage in – but because they are rarely involved in time-demanding household chores,⁵ they end up having more time for leisure than women (see e.g. Nabulo *et al.* 2009). For all their sacrifice, women supposedly reap little personal benefits from urban agriculture (Flynn 2001; Hovorka *et al.* 2009).

Related to the overall labour contribution at the household level, the performance of specific urban agriculture tasks is more or less gendered. In most cases, men and women perform specific tasks related to, among other things, their knowledge and skills, physical strength and time availability, and cultural norms. In most West African urban centres men perform most on-farm tasks including land preparation, watering, weeding, and spraying while women’s role is mostly confined to harvesting and marketing (Hope *et al.* 2009; Gaye & Touré 2009). Where women are the farmers, they hire male labour to perform most of the tough tasks. Studies in some East and Southern African towns have shown that on-farm tasks are shared, if unequally, between men and women. For instance, preparation of land and planting, respectively, are men’s and women’s responsibilities in Kampala (Nabulo *et al.* 2009), while women perform routine livestock-

⁵ In the context of Kampala, for instance, Nabulo *et al.* (2009) counted three household tasks performed by male for every ten tasks, with the rest being shouldered by women household members.

related tasks in Kisumu and men are responsible for animal health (Ishani 2009). But as a study in Buea (Ngome & Foeken 2012) indicates, the extent to which men and women can cross gender boundaries in terms of performing activities traditionally performed by the opposite gender may also depend on the level of control one has over the agricultural enterprise, benefits associated with the activities, and marital status. It is reported in this particular context that if a married man was the gardener, he participated in a wider range of urban agriculture activities including those traditionally associated with women, but less so if his female spouse was the gardener. Yet in the latter case the man would show up at the time of harvesting and selling. Unmarried women also performed “men’s tasks” on their plots.

It has also been shown that women tend to be more constrained than men when it comes to accessing land partly because of patrilineal cultural practices that exclude them from inheriting land (Gaya & Touré 2009), but also, and perhaps most importantly in the urban setting, because of women’s relatively low financial endowments. As a result women farmers are only able to afford (if at all) small low-quality plots, sometimes in peripheral and contaminated locations (e.g. Nabulo *et al.* 2009) or else, as is commonplace, they depend on men to access land for urban agriculture. In the latter case, women’s expectations (in respect both of access to land and to other urban agriculture-related inputs) are not always met should the men undervalue urban agriculture’s contribution to household well-being (see e.g. Toriro 2009). Thus although access to land in many urban centres may not be gender-biased in theory (Hope *et al.* 2009; Toriro 2009), in reality women are disadvantaged relative to men.

Women’s income poverty relates to their general underrepresentation in employment at all levels and to the fact that they have smaller asset stocks that can be transformed to financial capital. Studies have shown that men access credit to a greater extent than women on account, partly, of the latter’s lack of collateral such as land, but also because of the subsistence and small-scale nature of their agricultural enterprises (Nabulo *et al.* 2009; Ishani 2009; Toriro 2009). For a lack of financial capital, women gardeners are further constrained from improving the productivity of their plots and from engaging in agricultural activities that are more financially rewarding. Mbaye & Moustier (2000) attribute the absence of women from better-paying poultry and ornamental horticulture in Dakar (Senegal) to this reason. Foeken’s (2006) study of urban agriculture in Nakuru (Kenya) revealed that women attained lower yields than men and that female household heads attained lower yields in comparison with both male heads and married women. Another study by Ngome & Foeken (2012) in Buea (Cameroon) indicated a much higher proportion of unmarried women among urban gardeners who could not afford improved seeds. Inability to hire labour for heavy tasks also

results in women cultivating smaller uneconomic plots than men (Hope *et al.* 2009).

Gender differentials have also been observed in terms of agricultural knowledge and information levels among men and women. If farmers in general have limited access to extension services and technical support as has been reported in the literature, and for the reasons that were highlighted in the preceding section, then women are even more disadvantaged. Again, their low education levels mean that they cannot effectively comprehend advice and information provided in highly technical terms and in a language that requires higher literacy levels (Hope *et al.* 2009; Ngome & Foeken 2012); the targeting by extension service providers of household heads as has been reported in Buea excludes most women in conjugal households, although they may be the ones doing the actual farming (Ngome & Foeken 2012); and the off-farm out-of-town seminar approach adopted by some technical advisors also limits women's participation in such invaluable seminars because of women's reproductive responsibilities and cultural norms that tend to constrain their movement away from the home (Hope *et al.* 2009).

The situation in most West African cities is markedly different especially as regards women's mobility and participation in the market place. While men's knowledge and information about agricultural production at the farm level is superior to women's, the latter's dominance in the marketing of farm produce accords them an edge over men in terms of access to market information e.g. supply, demand and price trends (Hope *et al.* 2009). Using this information, the women are able to advance their interests vis-à-vis male farmers in a manner that has sometimes been described by the latter – especially those whose wives are not traders – as exploitative (*ibid.*). As reported by Hope and others (2009), the women enter into informal credit arrangements with male producers whereby they pre-finance men's agricultural production which binds the men to supply their produce to the market women at predetermined prices over which the men have little say.

Regarding decision-making, the general picture presented by the literature is that of both men and women playing key but varying decision-making roles in urban agriculture. The respective roles are mostly dependent upon the production systems they are involved in, which are in turn partly influenced by social norms and cultural expectations of men and women. Thus, women tend to play the major role in decision-making involving subsistence farming which they dominate (see Dennerly 1996) while men are the main decision makers in income-oriented agriculture, also their preferred enterprise. As in crop cultivation so it is in live-stock keeping that men and women tend to exercise authority when it comes to

the production systems they dominate, in this case large livestock and small livestock, respectively (Ishani 2009).

Women's level of access to urban agriculture productive resources, general socio-economic status and relative autonomy are also important influences in the decision-making matrix (Dennery 1996; Ishani 2009). In her study among livestock keepers in Kisumu (Kenya), Ishani (2009) found out that women in male-headed households exercised control over small livestock; but for large livestock "Even where the woman had bought the livestock, she neither owned it nor controlled it: in such cases there was joint ownership and control" (p. 110). In contrast, female household heads owned livestock even if they had adult sons, while an increase in married women's contribution to their households' income increased their voice (*ibid.*; see also Dennery 1996). But as Dennery's (1996) study in a different urban context indicated, women's role in decision-making – whether they decided alone or consulted their spouses – was dependent upon the importance/weight of the decision to be taken, which to a great extent related to traditional gender division of responsibility as well as intra-household power relations. Yet even where women wielded considerable bargaining power – owing to their socio-economic status or asset stocks commanded and which conferred a greater role in decision-making – they still deemed it necessary to consult with their spouses even over decisions they had already made themselves, if "only to maintain good relations and keep him up-to-date" (*ibid.*: 197). Men and women's decision-making responsibilities may also differ at different levels in the production chain. Studies in some West African cities indicate that men exercise control at the farm level while women make decisions regarding marketing of the produce (Gaye & Touré 2009).

The overall picture that emerges from the preceding overview of men's and women's participation in urban agriculture is one of 'women feeding cities'⁶ in a context of unequal power relations and gender inequalities. Yet urban agriculture carries greater significance for many women than it is generally recognized. It is more than just an activity that "meshes well with other expected household duties" (Maxwell 1995: 1673), and that enables women to "easily (attend) to the produce if and when they have a break from other duties" (Bryld 2003: 81). Nor is it simply a burdensome activity to which women turn and get trapped for lack of good education and relevant work skills to find better opportunities, and from which they derive little personal benefits (Flynn 2001; Hovorka *et al.* 2009). On the contrary, many women seem to happily, if silently, embrace urban farming for various other motives and benefits that accrue to their participation in it (see

⁶ Adopted from the title of a recent publication that sums up women's pivotal role in urban agriculture. The book explores critical gender issues in diverse urban case study contexts (see Hovorka *et al.* 2009).

Maxwell 1995; Freeman 1993; Flynn 2001; Page 2002; Maxwell *et al.* 1998; Tinsley 2003; Mougeot 2000; Dennery 1996).

Some of the benefits include the potential for economic empowerment by way of earning some income out of the activity and by safeguarding their income from other sources, which they would otherwise spend on household needs if they did not undertake farming. But in order to reap the benefits, they must reinforce or at least not challenge men's general view of urban agriculture as an activity of marginal economic value for the household (Maxwell 1995; Dennery 1996). Economic empowerment enables women to meet their reproductive responsibilities and enhances a sense of independence and status among women both within the household and in the community. Dennery (1996: 196) reports increased financial independence among female urban farmers in Nairobi as a result of which they "did not need to ask their husbands for cash to buy food or make small purchases." This contrasts with men's perception of urban agriculture in the same context when they "repeatedly said that food production was not a business" and that "the plots were too small to produce a substantial surplus" (*ibid.*). In a way this validates Maxwell's (1995) observation about how men's deficit perception of the value of urban agriculture provides women an important opportunity for manoeuvre.

By keeping women closer to their households, urban gardening also affords them the opportunity to provide proper parental care for their children. For some women, urban agriculture is also a means to capital formation necessary for entering other income generating activities as well as for building social capital by way of sharing their produce with friends and neighbours and meeting their obligations to social networks, including self-help groups and religious congregations. Some studies (e.g. Dennery 1996; Obosu-Mensah 1999; Mbiba 1995; Maxwell 1995) have also shown that due to its subsistence nature and its high dependence on female labour dictated by women's reproductive roles, urban farming, in an important way, vaults women in the vanguard of decision-making at the household level, enabling them to exercise some control over patterns of household resource use and allocation. A study of decision-making in urban agriculture in Nairobi concluded that

At the intra-household level, conceptualization of the sexual division of labour translates into attitudes which shape the allocation of resources and producer practices. Women (...) said that because they prepare food, they know the needs of the household and, therefore, decide how much produce to sell and what food to buy. The food production activities of women also shape their expectations as to how their spouses should allocate income from non-agricultural work. One of the reasons why Joyce (one of the respondents) expects her husband to pay for school fees is because her food production efforts largely eliminate household food expenditure. (Dennery 1996: 197)

Studies in Accra, Harare and Kampala also revealed that men provided or enabled their spouses to access necessary productive resources for urban farming and ceded decision-making ground to women in terms of choice of crops and use of produce on account of women's knowledge of household food requirements (Obosu-Mensah 1999; Mbiba 1995; Maxwell 1995). Where income is gained from urban farming, women's traditional role of marketing farm produce especially in West African cities also enables them to exercise some control over the income (Hope *et al.* 2009; Gaye & Touré 2009). This does not only enhance their autonomy and bargaining power in the household, but as Ngome & Foeken's (2012) study revealed, it can also enhance women's sense of pride and self-esteem, as expressed by a female gardener who noted that the returns from her tomato garden made her feel financially better-off than a college teacher. Social networking and solidarity among female urban farmers, and related collective action for the betterment of their circumstances at the community level have also been reported (Slater 2001; Jacobs & Xaba 2008).

For all these (potential) benefits, contrary to popular opinion, urban agriculture might as well be considered, as Freeman (1993: 20) does, as a 'pro-active, constructive, and productive' endeavour for women. This projection somewhat challenges the general conceptualization of the activity as mainly a household strategy. Instead, it somehow recasts it as a uniquely women's strategy to negotiate their social and economic spaces within the household. In particular, it enables women to enhance household food security by concealing from their husbands what they make from the activity in order to draw on their husbands' support which would otherwise not be available were the latter to know the real worth of urban agriculture. This may be particularly true in situations where incomes of various household members are not pooled, as is borne out by Maxwell's Kampala respondents who

(...) repeatedly insisted that if their husbands knew the real value of their economic activities, the result would be a lower financial contribution on the part of the husband to the costs of maintaining the household, which would increase the financial strain on women and reduce their options for maintaining food security. (Maxwell 1995: 1677)

More accurately, however, this posturing by women illustrates the complexity of the processes involved in constructing household livelihood systems and illuminates how the pursuit of gendered interests and goals by spouses underlies such processes. In particular, it shows how, "in pursuing their own economic endeavors (in conforming to traditional roles) women exploit and/or create spaces of inclusion" (Oberhauser *et al.* 2004: 207). But this also challenges the dominant view that female labour in urban agriculture is largely unrewarded and asks questions as to whether, when and in what form spouses expect to be rewarded in the first place. With regard to social aspects of gender relations, Okali (2006: 24)

suggests that the value that each gender attaches to various livelihood tasks will determine their expectations of themselves and of their spouses, noting, for example, that “Under certain conditions, wives may receive (or expect to receive) cash payment from husbands for weeding while under others, they may not”. Hence, the need for greater attention to be paid to intra-household gender dynamics, beyond division of labour.

Also implied by Maxwell’s Kampala respondents (and by Dennery’s, referred to above) is the relative vulnerability of female household heads since they lack such opportunities for manoeuvre available to married women. Perhaps it is for this reason that female household heads are generally poorer, invest less in urban agriculture and realize lower yields than both male household heads and married women.

Since urban farming is just one of the (often) many livelihood strategies pursued by urban households (Mougeot 2000; Mbiba 2000; Nugent 2000; Flynn 2001; Simatele & Binns 2008; Lynch 1994; Dennery 1996), it is critical to further explore linkages and trade-offs between urban farming and other household livelihood strategies and how gender relations shape and are shaped by these complexes. This proposition is based on the fact that different livelihood strategies require different capabilities and endowments; are subject to different structural and institutional constraints; and derive different well-being outcomes, all of which vary between men and women. Besides, different household members may participate in different activities for different reasons, which may sometimes be at variance or even in conflict with household interests (de Haan & Zoomers 2006). This does not only affect the linkages among livelihood activities, for instance, in terms of allocation of labour, time and other resources but can also affect long-term household food security as has been illustrated by the circumstances of a female respondent in Dennery’s Nairobi study:

(...) much of Martha’s time was taken up by the care of young children and procuring a small income which she uses for food and school fees. The immediate needs of the family took precedence over the longer term need to produce her own food. Martha’s decision to make daily survival a priority forces her to trade-off time for food production for time selling water. Martha’s ability to control her agricultural labour time is limited by her responsibilities to others” (Dennery 1996: 197).

Moreover, and as was elucidated in Chapter 1, different livelihood strategies are also governed by social constructs of gender roles, which are themselves under constant (re)negotiation in light of the dynamism of the urban environment and the opportunities and challenges it presents in comparison to the rural context.

The present study

While the gender issues highlighted above must be considered as only indicative, based as they are on a limited body of empirical research in a few contexts, they nonetheless highlight the importance of gender in urban agriculture. This study was intended to contribute to this emerging body of knowledge, using Kenya's Eldoret town as the case study.

In addition, the study recognizes that urban agriculture is just one of the many livelihood strategies that households pursue. This offers the entry point in understanding how individuals and households combine and organize their assets, activities and capabilities to construct their livelihoods and how gender relations shape these processes. It also offers an opportunity to highlight the multiple meanings (dimensions) that men and women derive from various assets, livelihood strategies and outcomes. Studies have tended to focus on urban agriculture as a stand-alone livelihood strategy without exploring how it fits within the complex web of other strategies that combine to form household livelihood systems. Moreover, little attention is focused on how these processes relate to the wider policy and institutional structures. While many urban agriculture studies present overviews of existing policy and institutional structures for farming at the city/town level, few focus on how these structures inter-relate with those at the macro (national) level and how livelihood responses adapted at the household level are not only impacted by these policies and structures but also impact them.

In addressing these issues, the study explored answers to the following question: how do gender dynamics shape the functioning of urban agriculture and the construction of livelihoods in Eldoret town, Kenya? The following specific questions delineated the scope of the study:

1. What is the contribution of men and women to urban agriculture and household livelihoods?
2. How does urban agriculture policy influence the possibility for men and women to undertake urban agriculture?
3. What farming resources are available to urban households and how does access to the resources differ between men and women?
4. What is the importance of urban agriculture to urban households and to individual men and women?
5. What are the motives and needs of men and women in urban agriculture?
6. How can urban agriculture be made more sustainable and equitable to men and women?

In answering the research questions, the data are analysed at various individual and household levels involving comparisons between: a) all males and all females; b) married males and their spouses; c) male-headed and female-headed households, and; d) female household heads and married women.

The setting and methods

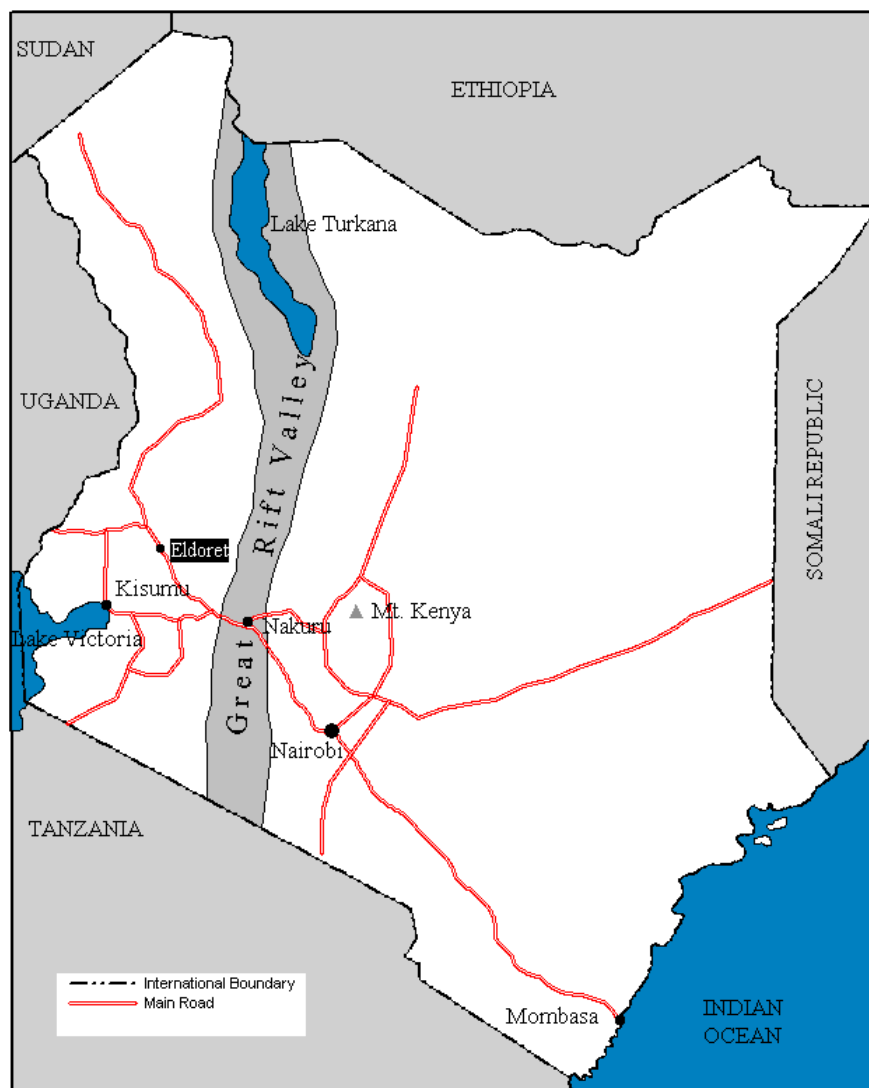
The existing body of knowledge on urban agriculture has largely been generated by research in major cities and urban centres, with perspectives on urban agriculture in medium-sized towns being under-represented (Foeken 2006; Mougeot 2000; Thornton 2008). The present study's focus on Eldoret, a medium-sized Kenyan town of approximately 500,000 inhabitants, is intended as part of a growing attempt at bridging this gap. Eldoret is the administrative headquarters of Uasin Gishu County. This chapter provides a brief overview of Eldoret, focusing on the town's geographical setting, and its historical, demographic and socio-economic development. It then provides a brief description of the actual research location, Langas settlement. The various stages of data collection and methods are then expounded, before describing the study population and socio-economic status of households.¹ The chapter ends with personal reflections on fieldwork experience.

Eldoret town: Geography and historical overview

Eldoret town is located 330 km to the northwest of Kenya's capital, Nairobi (see Map 3.1), at an altitude of 2,085 metres above sea level in the Great Rift Valley (GoK 2001). Eldoret is bisected by River Sosian, which flows through it roughly in an east-west direction. The town receives over 1000 mm of rainfall as annual average (GoK 1993, cited in Ombura 1997). The highest rainfall is received during the months of April and May followed by a dry spell in June. The rains then return in July peaking in the month of August and subsiding in September and October. The months that follow experience a dry spell with some scattered

¹ See chapters 4 and 5 for a detailed discussion of the socio-economic and policy context within which the households are situated.

Map 3.1 Map of Kenya and location of Eldoret



showers until the return of the rains again in March. The town also experiences relatively cool temperatures averaging 24°C during the day and 10°C at night.

The geological formation of the area belongs to the Tertiary Volcanic of the middle and upper tertiary age. The soils are primarily of two types, namely red to strong-brown friable clays with laterite horizon and grey mottled clays (*ibid.*). The soils and climatic conditions experienced by Eldoret town and its hinterland are favourable for arable farming and support a variety of agricultural activities.

Historically, the emergence and growth of Eldoret traces back to the activities of colonial settlers in Uasin Gishu and more so Afrikaner settlers who moved in from South Africa (Ndege 2005). Their settlement in the area necessitated the provision of various services such as security, transport, communication, etc. The emergence of Eldoret as an administrative centre to co-ordinate the provision of

these services started in earnest in 1908 when the then Uasin Gishu District Commissioner (DC) awarded a contract for the construction of the DC's residence, administrative offices and stores on Farm 64, so called because of the site's land survey number (*ibid.*). Taking its name after the site, the centre was called Farm 64. However, upon elevation to a township on 14 November 1912, it was renamed Eldoret with an administrative jurisdiction over an area of approximately 11.2 km² (Ombura 1997). The new status immediately spurred its growth manifested in the expansion of social facilities and physical structures as well as the establishment of postal, commercial, banking and recreational services to meet the demands of a growing population, but also in order to link Eldoret to other parts of the country. In 1929, the Municipal Board was established to run the affairs of the town, replacing the Township Committee (Ndege 2005) and boundaries extended to cover 25 km². In 1958, Eldoret assumed full municipality status and came under the management of a Municipal Council.

Eldoret's growth since has been helped largely by the agricultural activities of its hinterland, its official designation as a growth centre (Nyakaana 1996) and, as a consequence, the town's rapid industrialisation and population in-migration. Eldoret's hinterland is rich in a broad range of agricultural activities, including grain growing (especially wheat and maize), dairy farming and horticultural production. Eldoret's surrounding areas are also endowed with forestry resources, comprising indigenous forests and exotic plantations. These agricultural and forest resources have formed a basis for the development of the town into a major service, production, storage, processing and distribution centre for its hinterland as well as the whole country (Nyakaana 1996). Besides, the town lies along the Trans-African international trunk road that connects Kenya's capital, Nairobi and Uganda's capital, Kampala as well as South Sudan. It is also connected by railway from the port of Mombasa through Nairobi to Uganda and has an international airport. These make Eldoret an important regional transport and communication conduit. Eldoret also boasts the presence of a national university and several university campuses and numerous tertiary institutions in the town and its environs, making it a major educational centre.

Eldoret has grown to become the fifth largest town in Kenya – after Nairobi, Mombasa, Kisumu and Nakuru – with an estimated population of 500,000 up from an estimated 300,000 in 1999.² The high urban population growth rate has led to the sprawling of the town into the peri-urban areas occasioning further municipal boundary extensions in order to provide services to those areas (see Map 3.2). In 1974 the boundary was extended to cover an area of 59 km² from 25

² Eldoret Municipal Council website: <http://www.eldoretmunicipal.go.ke/>

Map 3.2 Eldoret municipal boundary changes

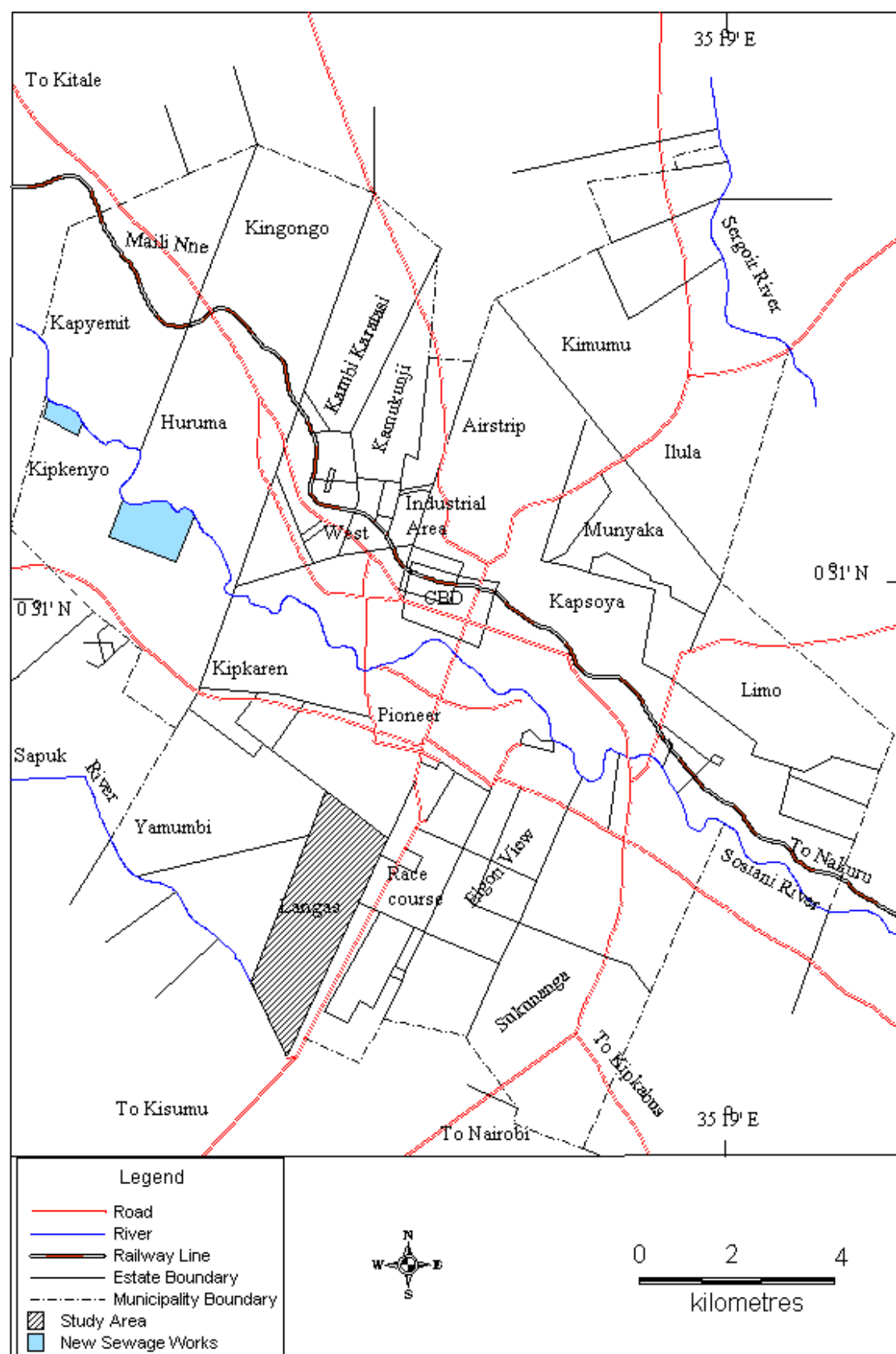


km² and, in 1988 this was extended to cover 147.9 km². Each time large tracts of agricultural land and ‘rural’ populations were brought under the jurisdiction of the municipality. Such extensions have also led to spontaneous emergence of unplanned settlements within the newly added municipal space. Langas is one of the settlements that emerged in that version following boundary extensions. Others include Muniyaka, Huruma, Kamukunji, Ya Mumbi, King’ong’o, Kimumu and Mwiyyenderi (see Map 3.3).

Langas settlement: The study site

Langas settlement is an informal high-density residential area located on the southern outskirts of Eldoret municipality, about 7 km from the town centre

Map 3.3 Residential areas in Eldoret Municipality.



along the Eldoret-Kisumu road (see Map 3.3). In 1999 Langas had an estimated population of 26,000 (Musyoka 2004). The population has grown steadily since and, although official statistics are not available yet, it is currently estimated by various sources at between 35,000 and 40,000 people.³ Although urban farming is omnipresent within Eldoret municipality, Langas was selected as the study site because it is the largest settlement within the municipality, and because its population mix in terms of ethnicity and income levels is a fair representation of Eldoret's urban population. Many residents are low-income earners making a living mostly from the informal sector as wage employees or from self-employment, and/or providing casual labour to factories in town. However, middle income and high-income earners and formal sector employees are also represented in the settlement, if to a lesser extent.

Levels and units of analysis

While the primary focus of this study is the household at the micro-level, with individual adult men and women as units of analysis, the analysis focuses at the meso- and macro-levels as well. Much has been said about the household in social research but little consensus has yielded as to its precise definition or the nature of its composition or internal functioning. This has however not diminished the importance of the household as a unit of analysis and focus of development interventions (Wilk 1991). The gender focus and the Sustainable Livelihood Approach (SLA) adopted in this study warrant a brief overview of the household debate here.

The subject of much contestation has been the conventional unitary model which is predicated on the assumption that the household functions as a single decision-making unit of co-residents who share common interests and well-being goals and pool resources to advance the same under the guidance of a household head who acts in the best interest of all (Schmink 1984; Godfrey 2010; Agarwal 1997; Chant 1998). It has come to be recognized that household members sometimes pursue interests that not only differ from and compete with one another's, but that may also be at variance or even in conflict with household livelihood interests and goals (de Haan & Zoomers 2006; Chant 1998; Bruce 1989). In the circumstances, pooling of labour and incomes for household reproduction is not necessarily assured (de Haan & Zoomers 2003). It is therefore more accurate to conceptualize households as sites of co-operation, conflict and bargaining among its members (Godfrey 2010; Narayan *et al.* 1999; Agarwal 1997), especially between men and women, who however often wield unequal power (Blackden &

³ Interview with the Assistant District Town Planning officer, Uasin Gishu District; Langas village elders.

Canagarajah 2003; Bradshaw 2002; de Haan & Zoomers 2003; Chambers & Conway 1992). As such, attention has been drawn to the need to ‘open up’ the household and focus attention on the role of individual members and on intra-household relations (de Haan & Zoomers 2003; Wilk 1991). This is especially in line with the SLA’s emphasis on individuals’ agency (de Haan & Zoomers 2003).

Moreover, while the archetypal unitary household is one of “a nuclear family (...) comprised of a male breadwinner, his non-working wife, and dependent children” (Schmink 1984: 90), in reality the composition and headship of households are diverse and subject to change in space, across societies and over time (Schmink 1984). And to the extent that men’s primacy as household heads derives in part from their “usual positions as major breadwinners and/or principal arbiters of decision-making within households” (Chant 1998: 8), the emergence of women in the vanguard of household sustenance – besides the now widely held view that men’s personal gratification is not necessarily subordinated to household interests – challenges the conventional conceptualizations of household headship (Narayan *et al.* 1999; Bruce 1989). Furthermore, an increasing proportion of households are today under effective headship of women either because such households lack an adult male member or because male members are absent for long spells.⁴ In any case, many households neither organize their livelihoods only in one place (Kaag *et al.* 2004) nor are sustained only by resident members (Meikle *et al.* 2001). For instance, many urban households maintain close links with rural areas, with some members spending considerable periods of time in both urban households and rural homes (sometimes regularly shuttling between them); while non-resident family members in either case sometimes contribute towards the sustenance of the households in which they are not ordinarily resident e.g. through remittances, food supply, etc. (Owuor 2006; Beall *et al.* 1999; Meikle *et al.* 2001).

In any case, the household cannot be conceived of only in terms of its material functions, but also in terms of non-material aspects such as solidarity, reciprocity, security, negotiation and status (Godfrey 2010), which are underpinned by cultural/social norms as are household responses to material circumstances (Schmink 1984). Indeed, the role of the household as an important locus for the reproduction and perpetuation – through socialization – of social norms and gender ideologies is widely acknowledged (Chant 1998; Narayan 1999; BRIDGE 2001). Consequently, a focus on the household and its mediation of intra-household relations aids an understanding of individuals’ diverse responses to general structural conditions as well as extra-household social processes (Schmink 1984).

⁴ The former are generally referred to as *de jure* female-headed households, and the latter as *de facto* female-headed or female-managed households (see Mutoro 1995; van Vuuren 2003).

But as Schmink (1984: 87-88) observes, “the household focus does not replace the need to study patterns at the individual or macrostructural level. Rather, it allows a richer and more complex approach that entails movement from one level to another at different analytical moments.”

Thus, on the one hand, embracing the SLA’s central premises of individual agency and holistic nature of livelihoods, this study disaggregated the household into the various social actors that constitute it – in this case adult men and women – and illuminates the various livelihood activities that men and women engage in and how intra-household relations influence men’s and women’s preferences, access to and control over resources, labour contributions, and decision-making power, and distribution of benefits in the context of organizing household livelihoods in general and in urban agriculture in particular.

On the other hand, the SLA’s recognition of the role of extra-household multi-level contexts and policy and institutional arrangements in shaping individuals’ and households’ livelihood choices necessitated the study’s focus on meso and macro-levels as well. The macro and meso focus was aimed at illuminating the structural factors, including policies, institutions and processes obtaining at national and municipal levels and how they interlink to not only shape the circumstances within which households make a living but also to shape relations between men and women in the process of making a living (see Chapter 4).

Analytical approach

Gender analysis

This study adapted the gender analysis framework developed by Hovorka (1998) and Hovorka *et al.* (2009), which provides a variety of diagnostic tools for the analysis of the key gender issues in urban agriculture. These tools include: a) *gender activity analysis chart*, which focuses on how different urban agriculture-related tasks are shared out between men and women, where they take place, how the nature and level of involvement in, and time spent on the performance of the tasks differ between men and women; b) *gender resource analysis and mapping* examines gender differences in terms of ownership, control and access to resources that are necessary for urban agriculture; c) *gender analysis matrix* examines how the tasks performed by men and women and the resources available to them are affected/influenced by cultural norms; d) *gender benefits analysis* explores how men and women benefit from the various products of urban agriculture production systems they engage in; e) *gender problems analysis* looks at the problems that men and women urban farmers face, the causes of those problems, how they cope with the problems and existing opportunities for addressing them; and f) *gender decision-making matrix*, which aids in the analysis of differences in

decision-making power between men and women in respect of various aspects of urban agriculture.

Household poverty / welfare analysis

The participating farming households were categorized into various socio-economic groups using asset-based welfare indices. Although income or consumption are the most commonly used measures of household welfare, collection of accurate information on income and consumption is often a difficult undertaking due, for example, to multiplicity and seasonal income fluctuations, non-documentation of incomes and, related to this, problems of recall on the part of respondents (Vyas & Kumaranayake 2006; Booysen *et al.* 2008). And as became apparent in Chapter 1, such measures do not, in any case, reflect the multidimensional nature of poverty and well-being, including the fact that while the poor may be deprived of cash income, they often do have in their possession tradable assets or income in kind (see Vyas & Kumaranayake 2006). For these reasons, alternative measures of household welfare have been explored in poverty and development studies, with asset-based welfare indices particularly gaining increasing traction (Booyesen *et al.* 2008).

Asset-based welfare indices are premised on the assumption that a household's socio-economic status can be read off the store of assets in its possession (e.g. television sets, bicycles, car, land, livestock, etc.), its access to certain utilities (e.g. water, electricity, etc.), and housing characteristics (e.g. sanitation, type of dwelling, etc.). The various assets and variables are weighted differently based on their contribution to household welfare and the level of distribution among, and therefore their differentiating effect on socio-economic status of, households (see Vyas & Kumaranayake 2006). The aggregate weights for respective households are then used as a basis of categorizing households into various socio-economic groups (*ibid.*).

This study constructed asset-based household welfare indices using the principal component analysis (PCA) (see *ibid.*). PCA was performed on a range of variables: household assets, access to utilities, tenure of dwelling and dwelling characteristics. Binary indicators were used to signify a household's ownership or non-ownership of each of seven private household assets, namely: urban plot, rural plot, car/tractor, motorbike, television, bicycle, and radio; as well as whether or not a household accessed piped water and electricity; and whether the dwelling was owner-occupied. Among essentially categorical variables, the analysis was based only on those that were both inequitably distributed among the households and were considered to have a positive impact on the household socio-economic status. This was the case with housing characteristics, whereby cemented wall and cemented floor were included in the analysis.

Data gathering phases and methods

The study was carried out in four phases, namely: a) key informant interviews; b) household survey; c) household in-depth interviews; and d) household case studies. Preceding these was a preparatory and reconnaissance phase involving several exploratory and familiarization tours within Eldoret municipality. Conducted in early July 2007, the aim of this exercise was to observe and map urban farming in the town, necessary for providing a basis for selecting study location(s) and sampling design. As part of the preparatory work, the researcher recruited three research assistants – one male and two female – who were acquainted to the issues under study and the scope of the study, and trained in survey methodology and interviewing techniques. Upon selection of the study location, the questionnaire was pre-tested with the help of the research assistants among farming households within the selected sites and revised accordingly. This was meant to ensure that the questionnaire items were understood by respondents as intended. The pre-tests were also important in terms of helping the principal researcher to clarify certain issues to the research assistants, and in terms of preparing the research team for anticipated challenges related to the questionnaire administration process.

Key informant interviews

Qualitative data collection through key informant interviews was conducted between July and September 2007 involving various stakeholders in urban agriculture – and in urban planning and governance more generally – within Eldoret municipality. The purpose of the interviews was to gain insights into the general structure of and key actors in urban agriculture as well as the various aspects – including laws, policies and official attitudes – that define the context within which urban agriculture takes place, and how these have evolved over time. The key informants were drawn from Eldoret Municipal Council (EMC)⁵, the town planning department⁶, Ministry of Agriculture and Livestock⁷, the Catholic Diocese of Eldoret⁸, FARMCHEM⁹ (a private seed company), and the provincial administration¹⁰.

⁵ Among these were: Chief Public Health Officer, Director of Environment, Acting Assistant Town Clerk, and Senior Enforcement Officer. Three councilors were also interviewed.

⁶ The Deputy District Planning Officer was interviewed.

⁷ Those interviewed included: District Agribusiness Development Officer, District Beekeeping/Marketing Officer, Divisional Crops Officer (Kapsaret Division), Agricultural Extension Officer (Pioneer Location), District Veterinary Officer and his deputy, District Animal Production Officer,

⁸ Programme Officers in charge of Agriculture and Food Security, and Gender programmes.

⁹ In particular, the Customer Service Representative and the demonstration garden attendant.

¹⁰ The Chief of Pioneer administrative location, in which Langas settlement is located, and eight Langas village elders who work under the Chief.

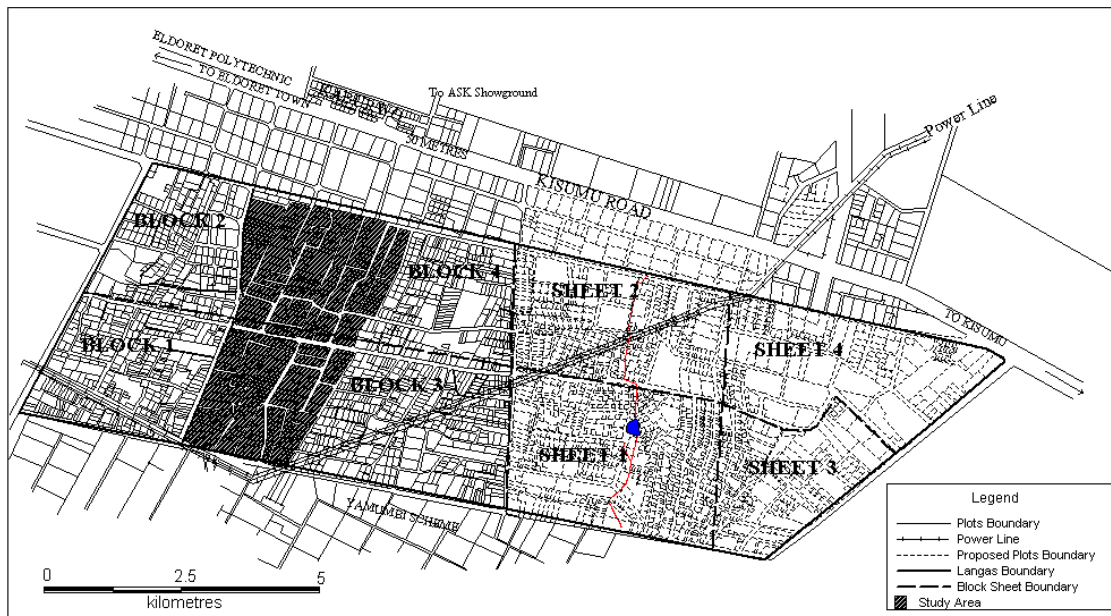
Household survey

The household survey collected quantitative data from 160 urban farming households and a total of 200 respondents. The survey was carried out between October and December 2007 and between August and September 2008.¹¹ It entailed administration of structured questionnaires and targeted male household heads and their spouses as well as female household heads. The questionnaire was divided into seven parts, with the various diagnostic tools mentioned above embedded within relevant parts of the questionnaire (see Appendix 3.1).

Sampling design and survey fieldwork

Langas is divided into four blocks (see Map 3.4). Compared to other blocks, Block 3 is considered worse-off while Block 4 is characterized as better-off on account of perceived income/poverty levels.¹² In order to achieve a representative sample of the population in the area and to incorporate various income groups in the sample population, the study purposively selected the two contrasting blocks for the survey. However, rather than sample across the entire blocks, the study adopted a geographic perspective whereby only a segment of each block and all farming households within the segment would be earmarked for the study. In

Map 3.4 Map of Langas showing location of study sites



¹¹ As shall be explained in detail in a latter section of this chapter, the time lapse between the first and second phases of what was supposed to be a continuous survey was occasioned by the violence that attended Kenya's December 2007 national elections.

¹² This is based on informal interviews with Langas village elders and personal observations during exploratory tours of the settlement.

both cases, the segment selected for study constituted about one quarter of the size of its respective block.

Although urban farming households were the basic sampling units, there were no records or listings of households or prior information about farming households in Langas settlement, where not every household engages in urban agriculture. As such, a census of all households in the selected sections of Block 3 and Block 4 was carried out, both to estimate the proportion of urban farming households in the settlement as well as to identify households eligible to participate in the survey. The census established that out of the 1,051 households counted, 232 (22%) engaged in urban farming of one kind or another. A higher proportion of farming households were recorded in Block 4 (32%, N=403) as compared to Block 3 (16%, N=648). Because Block 3 was considered to be worse-off than Block 4, this implies that – partly for the lack of farming space – the poorest among Langas residents were the most likely to miss out on the opportunity to benefit from urban agriculture.

Farming households with both male and female spouses, but also female-headed households were the main targets of data collection. In order to get the respondents, and especially women, to volunteer information more freely, the research team comprised of two male and two female interviewers – i.e. the principal researcher and three research assistants. This was intended to ensure that in the case of conjugal households, a female and a male interviewer visited households in pairs so that they would interview both spouses simultaneously, if separately. The male interviewer would administer the questionnaire to the male spouse in the household as the female research assistant interviewed the woman. Where only one spouse was available at home for interview, as was often the case, and in households without a second spouse (i.e. female-headed households and households headed by single men) the available respondent would be interviewed by the research assistant of the same gender as the respondent.

Household in-depth interviews

As a follow-up to the survey, household in-depth interviews were conducted to further observe and explore in greater detail some of the issues that arose during the survey and those that could not be captured adequately by the survey. Twenty four urban farming households were purposively selected for in-depth interviews, which took place between May and June 2009. While these were essentially identified from among those surveyed, a few others were selected outside this pool but within the same study area for the in-depth interviews on the basis of their potential to provide further insights on important issues. For instance, following the post-election violence (see below), I was interested in understanding how it impacted the livelihoods of urban farming households and how they re-

sponded to the same. Consequently, some households that were adversely affected by the post-election violence but that had not participated in the survey were included in this phase. Two households were also selected because the women were – contrary to the norm – known to be the main decision-makers in their households. As Wilk (1991: 9) has argued, “the workings of the household are often most evident in the exception to the rule”.

Household case studies

The fourth research phase involved household case studies, which involved several further follow-up visits to some of the households that had participated in the in-depth interviews. Since urban farming and other household livelihood activities are subject to seasonal fluctuations and primarily evolve as livelihood strategies within changing contexts of stresses and shocks, case studies make it possible to capture the dynamism of household livelihoods over time. In addition, longitudinal case studies particularly make it possible to undertake multi-level analysis involving analysis of dynamic interrelations between men and women within households, and between households and the various (and changing) policy and institutional structures operating at the municipal and national levels. A purposive sample of eight households was drawn from among those involved in the in-depth interviews. The cases were differentiated by, among others, household headship, type of farming system, ethnicity, and type of land tenure. The case studies, as with the in-depth interviews, involved various data gathering methods and techniques including: observations, in-depth and semi-structured interviews, informal conversations, and photography.

The respondents

Demographic characteristics of the respondents

Appendix 3.2 provides a summary of the demographic characteristics of the respondents. The survey covered 160 or 69% of the 232 farming households in the two study localities. Of those surveyed, 33 (or 21%) were female-headed and 127 (79%) male-headed. In all, 200 people granted interviews. Of these, 128 (64%) were female and 72 (36%) were male (see Table 3.1). In 40 male-headed households both spouses were interviewed (a total of 80 respondents). In the remaining male-headed households, one respondent was interviewed in each. Of these 55 were women and 32 were men (including 8 single men). The high proportion of female respondents in the study population relates to the presence of female-headed households, but also to women’s home-keeping responsibilities that confined them within their compounds and/or in the vicinity of their dwellings. As such it was easier to find women household members for interviews, while in

most cases men were said to be away on some income-earning activity or searching for some work to do, and that they often left home early and returned late.

In terms of the respondents' position in the household or relation to the household head, 70 (35%) were male household heads, 95 (48%) female spouses, and 31 (16%) female household heads. Other than household heads and spouses, 4 (2%) other household members were also interviewed, 2 males and 2 females.

Table 3.1 Distribution of respondents, by sex and household type

Household type	Respondents		Total
	Women	Men	
Male-headed (N=127)	95	72	167
Female-headed (N=33)	33	-	33
Total	128	72	200

The respondents were also differentiated in terms of age, levels of education, and ethnic background. The majority of the respondents were aged between 30 and 59 years. This age cohort made up 71% of the total sample, with 29% of the sample falling within the 40-49 age bracket, the single largest group. In terms of age relations between the various gender categories, female household heads were older (mean age 50.1 years) compared with male household heads (48.4 years), and more so with female spouses (39.4).

In terms of education, the majority of the respondents who disclosed their education levels (N=193) had received some formal schooling. Thirty-two percent of the respondents had received education up-to upper primary while 56% had received at least a secondary school education. Disaggregating this data by sex, one notices differences in education attainments between men and women. Among those educated up-to upper primary (N=61) were 30% of men respondents and 33% of women respondents. However, the proportion of men went up among those with secondary school education (at least two years) and more (62% versus 53%). Conversely, women were overrepresented among respondents with no formal education (14% to men's 8%).

Since culture has a bearing on livelihood choices including preferences for particular farming activities, and cultural norms play an important role in shaping gender relations, data on the respondents' ethnicity were also collected. One-half of the respondents belonged to the Kikuyu community and 22% to the Luhya community. The Kisii constituted 14% of the sample while the Kalenjin and the Luo made up 8% and 5%, respectively. The Kamba made up 1.5% as did members of the other communities put together.

Socio-economic status (SES) of households

Appendix 3.3 shows a descriptive analysis of the variables and PCA factor scores. Asset indices computed using the scores formed the basis for assigning the households into three categories denoting socio-economic status. That is, the higher the welfare scores, the better-off the household is considered to be and the lower the scores the worse-off. The categories were identified using the 40-40-20 formula (see Filmer & Pritchett 2001). This formula is used to rank households on the basis of their welfare scores by designating the lowest 40% of the households as ‘poor’, the second 40% as ‘medium’ and the top 20% as ‘rich’ (see Table 3.2). In this particular case, 66 households were categorized as ‘poor’, 62 as ‘medium’ and 32 as ‘rich’.¹³

Table 3.2 Household socio-economic status (SES), by gender of household head (%)

SES	Male-headed (N=127)	Female-headed (N=33)
“Poor”	37	58
“Medium”	43	21
“Rich”	20	21

The distribution of the households into these SES categories by household headship is shown in Table 3.2. The table tends to confirm the widely held view that female-headed households are among the poorest of the poor as more than half of the female-headed households surveyed belonged to the ‘poor’ category compared to just over one third of the male-headed households. Yet, the statistics in the third row of the table also show comparable representation of male- and female-headed households among the well-off households. This validates the growing criticism of the feminization of poverty thesis that female household headship is not necessarily synonymous with poverty and that it may in fact, under certain circumstances, offer greater opportunities for the advancement of women and thus household welfare (see Chapter 1; see also van Vuuren 2003). Subsequent chapters provide anecdotes that suggest that female heads of households enjoyed greater autonomy in decision-making and control over household resources as well as more economic independence and freedom to participate in the marketplace than the majority of married women. The latter were more dependent on men, their access to household productive resources was more limited, and their participation in the market place more restricted even when, given

¹³ The difference in the number of households in the ‘poor’ and ‘medium’ categories was occasioned by the occurrence of households with identical scores (at the ‘poor’/‘medium’ border) beyond the 40% mark for the ‘poor’ category.

the structure of the local economy, they would have had better chances than their husbands to earn an income. On the other hand, some married women who were able to appropriate income-earning opportunities either concealed their incomes from their husbands and were not free to invest in household assets for fear of rousing suspicion, or they avoided to invest in big ventures for fear that their husbands would take over such investments. Female heads of households were not as constrained. In other words, a consideration of the vulnerabilities and the complexity of the lived experiences of individual women (and men) is more useful in understanding their socio-economic circumstances and the general household welfare than generalizations based on household headship.

Rural-urban connections and multi-local livelihoods

Of the 160 urban farming households, 54% had a rural home with which they maintained contacts of varying nature and frequency. About one-third of such multi-spatial households owned land of their own and other property in the rural areas, and 23% said they practiced farming in the rural home, although a smaller proportion (8%) relied on rural food production for use in urban areas. Ownership of property, including livestock, in urban and rural areas is an important aspect of multi-local livelihood diversification as such assets often come in handy during hard economic times (see e.g. Owuor 2006). In this regard, female-headed households were disadvantaged, as only 24% of them compared to 62% of male-headed households identified with a rural home. Urban-rural linkages were also manifested in terms of remittances and other forms of support offered by urban households to their relatives in rural areas. One in every three urban farming households was involved in such exchanges.

Besides economic/material relations, urban-rural linkages were also anchored in cultural relations. The majority of rural homeowners among the urban farming households considered rural homes as their real homes as opposed to their urban houses (see also Owuor 2006) and tended to maintain their homes mainly for future relocation or return migration. This readily cropped up in interviews and informal discussions. Asked simply 'where is your home' – without specifying whether rural or urban – the respondents almost invariably stated their rural homes. For many urban Kenyans – especially first generation migrants – ownership of homes among their kith and kin in the rural territory of their ancestors is an important signifier of cultural rootedness and identity. This is underlined by the tendency among many urban residents to bury their urban kin and kith in their rural homes, usually at enormous financial costs. It is partly for this reason that urban residents, and men in particular, participate in social networks.

It is noteworthy that almost one-half of the urban farming households had limited or no contacts with a rural homeland. As such, and for all practical purposes,

Eldoret had over the years become their only home. Besides being more likely to be female-headed, such mono-spatial households were also more likely to be found among Kikuyus compared to members of other ethnic communities. Whereas the former case can be attributed to cultural practices that militate against women's inheritance of property, whether from their parents or from their husbands on death, divorce or separation, the latter relates to historical migratory tendencies among the Kikuyu. Land pressure in their ancestral homeland in Central Kenya has forced Kikuyus over the years to permanently migrate to other areas across the country, and more so into the land-abundant Rift Valley. It is therefore little wonder that Kikuyus are the single largest land-owning community within Langas settlement. Fifty nine percent of Kikuyu-headed households reported that they had no rural home and/or had weak connections with their rural homeland. Besides missing out on livelihood benefits of multi-locality, the events of post-election violence exposed the vulnerability of mono-spatial households, especially among Kikuyus given the fact that they were the main targets of ethnic hate and violence.

Fieldwork experiences and challenges

In the course of the fieldwork, several challenges were encountered, both methodological and practical. To begin with, the geographic logic that informed the sampling procedure was premised on a comparative analysis between two contrasting localities within the study area. As such, it was hoped that the sample would be distributed proportionately between the two blocks. However, it became readily apparent once the research team got to Block 3, which was characterized as a worse-off locality, that not only were few households engaged in urban agriculture there, but that it was difficult to find those who did at home to secure interviews with them. Besides, there was a high number of households whose heads were single and in the case of conjugal households, the prospects of interviewing missing spouses was generally low. This situation contrasted with that in Block 4, which was characterized as better-off. A higher number of households in Block 4 engaged in urban agriculture owing to higher levels of plot ownership and availability of space. It was also relatively easier to find urban farmers, in some instances both spouses, in their homes. As a result, households and respondents from Block 4 were overrepresented in the final sample (67%, see Appendix 3.2). Consequently, a comparative analysis of the two localities was rendered untenable.

The initially intended approach of interviewing both spouses simultaneously was also not easy to achieve. In most of the conjugal households it was rare to find both spouses home at the same time. As such, the spouses who were available at home would be interviewed and a call-back arranged for the second

spouse. In many cases, the first spouse provided contacts of the second spouse or informed the interviewer about the appropriate time to find him/her at home. In other cases, the interviewers were informed that the missing spouses could not easily be caught up with due to their busy schedules – some were said to leave in the wee hours of the morning every day and to return late in the evenings. In a few other cases, however, the interviewers were told outright that it was not possible to secure interviews from the missing spouses. Eventually the research team was able to interview both spouses in 40 households (a total of 80 respondents) out of 119 conjugal households.

Post-election violence of early 2008 particularly diminished prospects of ever meeting the sample target. In mid-December 2007, the research team took what was intended to be a short Christmas break, when the Christmas and electioneering mood for the late December 2007 elections peaked. It was expected that the early part of 2008 would be dedicated to call-backs to those households where only one spouse had been interviewed. However, it was not possible to resume the survey as planned due to a flare-up in violence following the disputed presidential elections (see Chapter 4). Because ethnicity has evolved over the years as the primary tool for political mobilization in Kenya, the post-election violence took on an ethnic dimension. Eldoret was one of the areas in the country that was hardest hit by the violence, and Langas particularly suffered the consequences because of its ethnic mix and especially the heavy presence of Kikuyus there. Kikuyus, who were the majority of survey respondents, were the main targets of arson attacks in the area. Many people were uprooted and displaced from their homes and many of them were unable or unwilling to return to their homes many months after (see Nyaroiro Gatonye's story in Chapter 4 as captured by Habitat for Humanity Kenya), including some household members who were supposed to be interviewed after the elections (having interviewed their spouses earlier).

However, whereas the post-election violence posed practical difficulties for fieldwork, it nonetheless enriched the study conceptually by offering an opportunity to understand the vulnerability of urban household livelihoods to, and their resilience in the face of, such dramatic external shocks. The study highlights how some farming households lost their animals and crops, and other household assets to marauding gangs, and had their dwellings razed down. It also highlights the coping and survival strategies adopted by different households, the positive and negative role of social networks for household survival, and how urban farmers' perception of vulnerability was affected by the post-election events.

Other challenges related to urban farmers' (non)co-operation with the research team. Being the largest informal settlement in Eldoret town, Langas has been the focus of many urban-related studies in the town. Some respondents complained that they had been interviewed several times by different researchers but that they

had not gained anything in return. There was the perception that researchers could be gathering information from people for their own personal gain. In a few cases, respondents refused to grant interviews demanding that they be paid beforehand. Other residents' attitude towards the research manifested latent insecurity of tenure in land. In one case, a young man confronted his widowed mother over the latter's decision to "divulge a lot of information about land to people who may be plotting to grab it". It turned out that there was a dispute over the plot since his father's demise.¹⁴ Previous harassment of urban farmers by EMC also informed individuals' reaction to interview requests. Pig keepers were especially apprehensive about the intentions of the research, suspecting that it was being conducted on behalf of EMC to identify pig farmers for punitive measures to be taken against them. EMC discourages pig-keeping in the town and has previously harassed pig farmers and even poisoned roaming pigs (see Chapter 5). Pig keepers who granted interviews did not usually allow the research team to take any pictures. As one way of allaying respondents' fears, we were guided around by the village elders responsible for the respective blocks we visited. As people who arbitrate the day-to-day disputes within their blocks, village elders were well known to the people and as such enlisting their assistance was an important way of gaining people's confidence. With time, however, people began to appreciate what we were doing.

It was also the case that many urban farmers did not keep records about the income they earn from urban agriculture and from other income-generating activities. This is not helped by the fact that income from most household income sources was irregular and seasonal. Thus, rather than use income as a measure of a household's socio-economic status, asset-based welfare indices were used. Lack of accurate income data also made it difficult to quantitatively assess the relative value of urban agriculture vis-à-vis other income-generating activities.

¹⁴ It helped that the young man was a primary school teacher who was in the process of applying for admission into the university where the principal researcher was a lecturer. Once he learnt of it and the purpose of the study was explained to him, he not only calmed down but also offered to be interviewed.

The vulnerability context of urban farmers in Eldoret

This chapter presents the various economic, political and social trends and related policies, institutions and processes at the macro (national) and meso (municipal) levels that interrelate to define the vulnerability context within which urban farming households in Eldoret in general, and in Langas settlement in particular, strive to make a living. The first section focuses on the macro context and the second section on the meso context. The policy context specific to urban agriculture is, however, discussed in Chapter 5.

The macro context

The focus in this section is on the national trends in urbanization, urban growth and economic performance and their impact on urban poverty. Also highlighted are the various economic and social policies and processes that have been instituted by the national government to address poverty and gender inequalities.

Urbanization, urban growth, economic development and poverty in Kenya

Kenya's urban population growth and urbanization rates are among the highest in sub-Saharan Africa (Obudho 1999a). The urban population grew from 671,000 constituting 7.8% of the total population in 1962 to 5.4 million or 19% of Kenya's population in 1999 (Obudho 1999a; GoK 2007). It then more than doubled in the 1999-2009 inter-censal period to reach 12.5 million, while the total population grew by 34% over the same period from 28.7 million to 38.6 million (GoK 2007; GoK 2010). Thus from 19% of the total population in 1999, the proportion of the urban population grew to 32% in 2009. It is estimated that by 2030 over 50% of Kenya's population will reside in urban areas (GoK 2007).

As with many countries in sub-Saharan Africa, this rapid urbanization and urban growth has occurred for the most part against a backdrop of sluggish economic growth, poor urban planning and governance, and a lack of capacity to effectively manage the challenges associated with rapid urban growth (Obudho 1999a, 1999b; Situma 1999; GoK 2007). While the country registered impressive economic growth in the 1960s and early 1970s (Githinji 2010; Rono 2002), the economy took a downturn in the 1980s owing to poor political and economic governance characterized by incompetence, official corruption, and inequitable distribution of resources and opportunities, especially during President Moi's dictatorial rule. The economic situation was aggravated by the introduction of IMF-World Bank structural reforms (Rono 2002). Manufacturing has been on the decline and its estimated contribution to GDP stagnated at about 10% since the 1960s (GoK 2007: 69); agricultural output fell between 1993 and 2001 (Gitu 2004); and wage employment has declined in absolute terms over the years (Odhiambo & Manda 2003).

Thus while poverty eradication has been one of the major development priorities of the government of Kenya since independence in 1963, poor economic performance has negated government efforts despite consistent anti-poverty policy pronouncements. Until 2003 when it begun to decline slightly from 56%, the proportion of Kenya's population afflicted by absolute poverty had been increasing – and doing so faster in urban than in rural areas. While the proportion of the poor grew from 29% of the urban population in 1992 to 49% in 1997, the rural poor increased at a relatively slower pace from 42% to 52% over the same period (Odhiambo & Manda 2003). The plight of the poor is worsened by a lack of formal social security and welfare programmes to cushion them against shocks. For instance, household survey data showed that between 95% and 98% of the lowest three quintiles of the Kenyan population lack health insurance (Xu *et al.* 2006, cited in Mathauer *et al.* 2008). This means that in times of failing health, the poor are expected to meet the cost of health care by themselves. It was further shown that one in every three poor people do not seek medical care, half of them because of a lack of finances, while others have had to incur 'catastrophic' expenditures¹ (*ibid.*).

After a change of government in 2003, the Kenyan economy started on a recovery path. The new government instituted economic reforms – under the *Economic Recovery Strategy for Wealth and Employment Creation* (ERS) 2003-2007 policy – that saw a steady recovery from 0.6% in 2002 to over 6% in 2007 (GoK 2007). However, this upward trend in economic growth reversed in the aftermath

¹ Defined as expenditures in excess of 40% of disposable household incomes.

of post-election violence in 2008.² However, the resolution of the political conflict, and the subsequent restoration of relative peace and implementation of political reforms that culminated with the enactment of a new constitution in 2010, put the economy back on an upward trend. The government also followed up ERS with the adoption of a longer-term policy blueprint dubbed *Kenya Vision 2030* (GoK 2007) that now forms the reference point for all government programmes and planning activities. Mooted in 2005 and officially launched in June 2008, *Kenya Vision 2030* provides a blueprint for economic, social and political transformation of the country into “a newly-industrializing, middle income country providing a high quality of life to all its citizens in a clean and secure environment” (GoK 2007: vii).

As a result of positive economic growth since 2003, the national levels of poverty dropped from 56% in 2002 to 46% in 2006. However, policy makers and development practitioners agree that poverty in urban Kenya is on the increase and deepening and requires urgent attention (GoK 2007; Oxfam 2009). Urban poverty has manifested in various ways, including food insecurity, burgeoning of the informal sector and mushrooming of informal urban settlements.

Owing to poor agricultural performance, the country has continued to rely on food imports³ and food aid to meet her ever growing domestic demand and in the process exposing the urban population to the vagaries of the world food market, with the poor being the most affected (Musyoka *et al.* 2010). Thus, while absolute poverty may have declined, the proportion of the ‘urban food poor’⁴ has been on the rise, growing from 38% in 1997 to about 41% in 2006 (Oxfam 2009). It is believed that Nairobi is home to one third of the estimated 4 million urban food poor, while as high as 50% of urban populations of some urban centres (e.g. Mombasa and Nakuru) suffer food poverty (*ibid.*). Food insecurity among poor households is caused not so much by problems of food supply at the aggregate level, as by declining real incomes compounded by rising food prices⁵ (Gitu 2004; Musyoka *et al.* 2010).

² In December 2007, Kenyans went to the polls in a closely and fiercely fought presidential race between the incumbent Mwai Kibaki and a leading opposition candidate, Raila Odinga. Although the campaigns and actual voting proceeded peacefully, the declaration of Mwai Kibaki by the electoral body as the eventual victor was disputed by the opposition and sparked unprecedented violence across the country, and especially in the opposition stronghold of Rift Valley province. The violence claimed over 1,000 lives and displaced about 600,000 from their homes (Kenya Human Rights Commission & National Network for IDPs in Kenya 2011).

³ For instance, wheat and sugar imports rose from 48,500 and 3,100 tonnes in 1980 to 636,000 and 96,000 tonnes in 2000, respectively (Gitu 2004). Rice imports increased even more exponentially over the period, from 1,200 to 105,800 tonnes (*ibid.*).

⁴ According to Oxfam (2009: 1), the ‘urban food poor’ “are even poorer than the ‘absolute poor’ and can barely meet their nutritional requirements, let alone other basic needs”.

⁵ It is estimated, for example, that the national food price index shot by 70% between 2005 and 2008 (ASAREC 2008, in Musyoka *et al.* 2010: 179). In the November 2007 – June 2008 six-month period, food prices rose by 50%, while wages remained static (Oxfam 2009) leading to food riots that have

On the other hand, the decline of the formal employment sector – accentuated by retrenchment and employment freeze in the formal public sector as part of structural adjustment reforms that began in the 1980s – has left the informal sector as the major alternative for an estimated 500,000 new entrants into the job market annually, but also for formal sector employees experiencing a decline in real incomes (Odhiambo & Manda 2003). The informal sector is estimated to account for up to 75% of Kenya’s urban employment (Odhiambo & Manda 2003; Oxfam 2009). However, because the sector is flooded and characterized by low productivity and low levels of income, participation in the informal sector has been more a manifestation of poverty than a route out of poverty for a majority of the participants. Daniels (1999) concluded from the survey results of micro and small enterprises (MSEs) in Kenya that whereas a small percentage of MSEs realized higher incomes than the average modern sector incomes, 72% of the MSEs in urban areas earned incomes that fell below the poverty line. According to the 1997 Welfare Monitoring Survey, about 70% of the working poor were in the informal sector (Odhiambo & Manda 2003); and the majority of them live in informal settlements. It is the government’s goal, as articulated in *Kenya Vision 2030*, to integrate the informal sector into the formal economy so ‘they can grow into sustainable small- and medium-sized businesses’ (GoK 2007: 66).

It is estimated that between 50% and 60% of Kenya’s urban population live in informal and squatter settlements (GoK 2007; Oxfam 2009). Such settlements are overcrowded and characterized by unsanitary conditions, insecurity, environmental health risks, and a lack of basic services. Only about 25% to 55% of urban waste in large urban centres is collected and disposed of safely (Obudho 1999a), up to 90% of households in informal settlements have no piped water connection (Mitullah 1999), and only 30% of the 142 gazetted urban areas in 1999 had sewerage systems (Situma 1999). On the government’s own acknowledgement, environmental conditions in slums are worse than those in poor rural settlements: “rural houses are less crowded and are more likely to have better access to sanitation facilities than houses located in dense urban slums” (GoK 2007: 143). The government attributes the proliferation of poorly serviced and provisioned informal and squatter settlements to the rapid urban population growth and the inability (on the part of both the public and private sectors) to provide decent low-cost housing at as fast a pace.⁶ In particular, the government takes issue with “outdated legal and regulatory frameworks, which affect the

been christened *unga* (or maize flour) riots. There have been intermittent *unga* riots in Nairobi since, the most recent occurring in July 2011.

⁶ It is estimated that out of a total of 150,000 housing units required annually in urban areas, only an estimated 35,000 are produced and only 20% of these cater for the needs of low-income households (GoK 2007).

amount of serviced land available” for housing, and especially with poor urban planning:

(...) urban areas have grown haphazardly, most without physical development plans, which have caused economic inefficiency and environmental degradation and led to poor living conditions. Planning, when done, has tended to react to urban development, rather than direct it (GoK 2007: 144)

Kenya Vision 2030 sets out to henceforth evolve “the right urban-planning strategy” to guide urbanization and to “promote sustainable urbanization by creating functional, vibrant and efficient urban centres” (GoK 2007: 144). The strategy will encompass, among other things, strategic development, physical and investment plans for all urban areas; a national land use policy; and provision of physical and social infrastructures to slums and formalization of slums (*ibid.*). Some of this work has already begun. Of particular relevance to this study, as shall be seen below, is the development of *Sessional Paper No. 3 of 2009 on National Land Policy* (2010)⁷ and the draft *National Urban and Peri-Urban Agriculture and Livestock Policy* (2010) made public in May 2010 by the ministries of Agriculture and livestock Development.

Social norms, gender inequalities, and formal institutions

On the gender front, gender mainstreaming has been a longstanding objective of the Kenya government’s development planning process. Over the years, the government has not only acknowledged existing gender disparities in all spheres of economic, social and political life, and the importance of gender equality for national development, but it has also successively instituted various policy and institutional mechanisms aimed at closing the gender gap.⁸ This is in addition to a corpus of statutory legislations that provide for gender equality and the protection of women’s rights. However, progress towards gender equality has been slow, and as the government has acknowledged, “a lot of effort still needs to be made” (GoK 2007: 133).

Women continue to be disadvantaged at all levels of societal life – from the household, through to the community and up to the national level. Although they shoulder the greatest responsibilities in household reproduction and community management, as in many parts of sub-Saharan Africa (see Chapter 1), women in

⁷ Other related initiatives include the Kenya Slum Upgrading Project (KENSUP), a collaborative effort between the GoK and UN-Habitat, and the World Bank-financed Kenya Informal Settlement Improvement Programme (KISIP).

⁸ For an assessment of the various government policies, instruments and institutions on gender mainstreaming, see Wanjala & Odongo (2010); also Ouma & Maina (2010). These include *National Policy on Gender and Development* (2000); National Commission on Gender and Development (2003); *Sessional Paper No. 2 of 2006 on Gender Equality and Development* (2006); *Plan of Action (2008-2012) to Implement the National Policy on Gender and Development* (2008); *Monitoring and Evaluation Framework for Gender Mainstreaming* (2009), etc.

Kenya have limited endowments and entitlements and are relatively poorer than men. Statistics show that poverty levels are higher among women compared to men (46% to 30%) (GoK 2007: 134), and higher among female-headed households (46%) compared to male-headed households (30%) (Oxfam 2009). Cultural practices and social norms discriminate against women in the inheritance of property and in ownership and control of productive assets, including, for example, land, cattle, and housing (Gitu 2004; Githinji 2010; Ellis *et al.* 2007). In most part women only enjoy user rights over the resources and are commonly disinherited on their spouses' death or on separation or divorce. Women own only 1% of all registered land individually, and another 5-6% jointly with men, yet they provide about 70% of Kenya's agricultural labour (see Ellis *et al.* 2007). In terms of access to credit, 18% of women had access to formal credit compared to 28% of men in 2009, but a higher proportion of women accessed credit through informal channels (33% to 19%) (see Wanjala & Odongo 2010).

Gender inequalities are also reflected in education attainment gaps at all education levels as well as the general adult literacy levels. Although the introduction of free primary education and secondary tuition waivers in recent years have substantially raised gross enrolment rates for both boys and girls at primary and secondary levels, enrolment levels are still higher among boys compared to girls (see Wanjala & Odongo 2010; Ouma & Maina 2010). The gender gap in education is even wider in middle-level colleges and, more so, in public universities (Ouma & Maina 2010). Many factors combine to limit the girl child's access to education. These include perceptions by poor families that investment in girls is a waste of resources given cultural expectations that girls will eventually marry into other families. Thus "[a]s long as families are struggling to meet basic needs and children are required to pay tuition fees and other costs of pursuing an education, the tendency has been to withdraw the children – and more so girl children – from school" (*ibid.*: 97; also Mitullah 1999). Cultural expectations that girls should assist their mothers with domestic chores also place greater demands on their time relative to boys' as a result of which girls do not concentrate well on studies leading to poor performance in school and lower transition levels. In regard to urban literacy levels, slightly higher (91%) literacy is recorded among men compared to women (84%) (Ouma & Maina 2010).

Partly as a result of lower education and capability levels, and partly as a result of employment discriminatory practices, women have limited access to employment opportunities in the formal sector. At independence in 1964 women took up only about 12% of formal sector employment, a proportion that rose to 21% in 1990 (Mitullah 1999). According to the 1997 Welfare Monitoring Survey, women constituted only about 30% and 24% of formal public and private sector wage employees, and were overrepresented among the unemployed (62%),

and among the unpaid domestic workers (90%) (see Odhiambo & Manda 2003). This situation remained virtually unchanged at the close of 2009. A survey of 36 of 42 government ministries by the Ministry of Gender, Children and Social Development for that year showed that women accounted for only 32% of the workforce in the ministries and related government institutions and departments compared to 68% men, and that the women employees were concentrated in the lower job groups (see Ouma & Maina 2010). Locked out of the formal employment sector, and against the backdrop of declining household incomes in the aftermath of men's job losses in the formal sector and/or declining purchasing power, women have been pushed by the urgency to supplement household incomes into the informal sector. Daniels (1999: 63) has also concluded that women "may choose the convenience of operating from the home in order to combine their MSE (micro and small enterprise) activity with household responsibilities instead of finding work in the modern sector".

Women's level of participation in the informal sector has increased steadily over the years to match men's (Daniels 1999; Odhiambo & Manda 2003). It has been estimated that by 1998/9, 89% of urban women (compared to 93% of men) were involved in income-earning activities, mostly in the informal sector, up from 39% compared to 84% of men in the 1970s (Odhiambo & Manda 2003). Earlier in 1995, a nation-wide survey of MSEs also indicated that the number of men and women operating MSEs was more or less the same, but that women's enterprises were less profitable than men's (Daniels 1999). The latter point is partly associated with the fact that support for the informal sector from the government and development agencies has focused more on activities dominated by men compared to those undertaken by women (Mitullah 1999).⁹

As regards differentials in autonomy, ownership and control of resources, and decision-making power between men and women, studies have similarly highlighted women's weak position, which becomes more precarious with a drop in education attainments and social status. For instance, the 2003 Kenya Demographic and Health Survey (CBS/MoH/ORC Macro 2004) established that 10% of women did not exercise control over their money and for another 23% someone else was involved in deciding how their money should be used. The survey also found out that for 43% of married women and those cohabiting with male partners, it is the men who took decisions about the women's health. Such women were more likely to have no formal education or to have received only primary education. More educated women tended to exercise greater control over

⁹ For instance, Mitullah cites the *Sessional Paper 1 of 1986* as evidence of gender bias in informal sector support. The Sessional Paper provides that "special attention will be paid to informal sector entrepreneurs in manufacturing, construction, transport, housing and those firms with the potential to acquire the experience and capital necessary to make a transition to large enterprises". No doubt enterprises in these fields are largely the domain of men.

their health and to enjoy greater autonomy and decision-making power at the household level more generally.

The slow progress towards gender parity despite government efforts has been attributed to poor harmonization of the various gender-related policies; poor co-ordination between different government departments and agencies involved in the implementation process; a lack of political goodwill; weak technical capacity; and a lack of financial resources for policy implementation (GoK 2007; Wanjala & Odongo 2010; Ouma & Maina 2010). Attainment of gender equality is also bogged down by poor enforcement of existing statutory laws; contradictions in the laws; women's lack of access to justice due either to illiteracy and lack of financial resources or for fear of social stigmatization and retribution; and, perhaps most importantly, by entrenched patriarchy and related social norms and gender ideologies. Despite the existence of statutory laws that recognize women's property rights, patriarchal customary law systems that exclude women from property ownership still prevail at the local level in most Kenyan communities:

The extent to which discriminatory customary law overrides largely non-discriminatory statute law in relation to women's property rights has been a major source of judicial determination and is still an uncertain area of law. But for most women, the formal legal position is irrelevant in practice. For them justice is dispensed at the local level, without recourse to the formal courts, and customary norms apply. (Ellis *et al.* 2007: 5)

As a continuation of the government's sustained efforts, *Kenya Vision 2030* stipulates that 'specific policy measures will be taken to correct the glaring gender gaps in access to and control of resources, economic opportunities, and in power and political voice' (GoK 2007: 133). And at the time of writing, a new constitution had been promulgated, which has been widely hailed as perhaps providing the best platform yet for protecting women's rights, redressing gender imbalances, and transforming gender relations at all levels of society.

The meso context

This section begins by highlighting trends in Eldoret's economic growth, residents' livelihood responses to economic changes, and Eldoret Municipal Council (EMC) policies and their impact on the livelihood strategies of the poor. It then focuses on the political context in terms of poor people's relations with EMC, their positioning within the national political matrix and what this means for their livelihoods. The social context is considered next, followed by an overview of the town's land tenure regime and its implications for urban planning and urban agriculture.

The economic context

As was pointed out in Chapter 3, Eldoret's hinterland is richly endowed with agricultural and other industrial raw materials and strategically positioned within the nation's transport and communication network. As a result, Eldoret has attracted many industries and other economic activities. These include agricultural food processing, agricultural non-food manufacturing, as well as non-agricultural manufacturing and service industries. In 1994, there were 190 industrial establishments in Eldoret municipality, which provided direct formal employment for an estimated 19,000 urban dwellers in 1990, excluding those in mining and quarrying industries (Ombura 1997). Indirectly, the industries have also provided many more income-earning opportunities in support services such as commercial transport, housing, retail trade, and distribution. Because of industrial activities in the town, Eldoret is said to enjoy higher per capita incomes compared to other Kenyan towns (*ibid.*).

However, in concert with what was happening nationally, some sectors of the Eldoret economy suffered economic downturn starting in the late 1980s leading to a decline in earnings especially in the manufacturing and construction industries. Some of the most important employers in Eldoret previously like Rift Valley Textiles (Rivatex) and Raymonds Woolen Mills¹⁰ – and indeed many other textile industries in other parts of the country, estimated at 87 in all – collapsed in the 1990s partly as a result of the liberalisation of the Kenyan market. Coupled with high costs of inputs, a flooding of the market with cheap imports and second-hand clothes, and the country's economic recession of the 1990s and falling prices on the world market, these industries could no longer sustain their profitability and were forced to close, leading to loss of many jobs and a disruption of people's livelihoods. For state-supported industries like Rivatex, the withdrawal of government support was particularly crippling. Located in the vicinity of Langas settlement in Eldoret, Rivatex alone reportedly supported over 8,000 people in the locality.¹¹ Other Eldoret-based industries that closed down during this period include the East African Tanning and Extract Company (EATEC), and the Eldoret plant of Kenya Co-operative Creameries (KCC).¹²

Most of those affected by redundancies and lay-offs of this kind as well as those who aspired to secure employment in the public sector were forced to look for income-earning opportunities elsewhere, mostly in the informal sector including urban farming (see Chapter 5). While some were lucky to rebound within short periods of time, others took longer. Several male respondents reminisced

¹⁰ Information accessed at: <http://www.actionaid.org/main.aspx?PageID=324>

¹¹ *Ibid.*

¹² Unlike the other industries, the collapse of KCC has been largely blamed on mismanagement and rampant corruption.

‘better days’ when they were engaged in meaningful employment (or *kazi ya maana*, as they put it, in reference to formal sector employment). In Eldoret, the informal sector absorbs a large majority of the more than 60% of the labour force that does not find employment in the formal sector (Nyakaana 1997). Kamau’s (n.d.) study of poverty among female household heads in four informal settlements in Eldoret found that 80% of them were involved in the informal sector. However, various obstacles limit the productivity of the informal sector in Eldoret.

Lack of financial capital to invest in profitable ventures has been identified among major constraints faced by informal sector workers, with women known to disproportionately suffer financial difficulties for lacking collateral (in the form of other capital assets such as land) to access formal credit given low rates of property ownership among them (Kamau n.d.; Otunga *et al.* 2001; Nyakaana 1997). For instance, Kamau’s study showed that 70% of the widows had been chased away from their matrimonial homes by their in-laws and never inherited their husband’s property, forcing them into urban slums (Kamau n.d.). Moreover, 31% of the women also expressed the wish for financial assistance from the government, while a few (3%) had sought and failed to access credit. A study by Otunga *et al.* (2001) among women entrepreneurs in Eldoret established that only 4% of their respondents had received credit from formal financial institutions (1% from banks and 3% from co-operatives) and another study by Nyakaana (1997) found out that only 23% of entrepreneurs in the town’s informal economy received credit financing from a variety of sources. As a result of these, income levels of many self-employed informal sector workers were low. Kamau (n.d.) reports that the majority of female household heads in his study mainly operated small businesses that required little financial capital investment, with some of them probably involved in such activities as prostitution and brewing of prohibited liquor¹³; and that 80% of those participating earned incomes below the minimum monthly requirement for urban households.¹⁴

Another major obstacle that prospective entrants into the informal sector have to contend with is a lack of infrastructure in terms of space from where to carry out trading activities. Fewer sheds exist in a few specially designated localities within the municipality than can meet the overwhelming demand for them and some designated areas are far-removed from the town centre and located in sparsely populated areas with limited demand for goods and services (Otunga *et al.* 2001). Consequently, large numbers of informal sector operators have been

¹³ Kamau based this conclusion on the fact that 26% of the women did not specify the activities they were involved in and that they reported being “in constant conflict with the law enforcement agents” (p. 9).

¹⁴ At the time this was estimated at Kshs. 3,725 (approximately 62 US\$) per month (Kamau n.d.).

forced to utilize whatever space is available to undertake their business activities. Activities in the informal sector are conducted mainly within the CBD along busy streets, on pavements and near municipal markets and bus parks, and in high density residential areas, notably Langas, Huruma, King'ong'o, Munyaka and Mathare (Nyakaana 1997). For urban residents who own houses, often their houses can constitute important physical assets in form of business shelter. However, many poor urban residents stay in rental houses; only 11% of female household heads in Kamau's (n.d.) study owned dwellings.

Capability development opportunities such as apprenticeship, business training, agricultural extension services, etc. are other limiting factors (Kamau n.d.). Given their generally low education levels, women would particularly benefit from such opportunities and services. Above all, the existing policies and by-laws regulating informal sector activities in Eldoret are stringent and official attitudes towards the activities unfavourable. As a consequence, harassment of informal sector operators, including urban farmers, by the EMC has been commonplace. This was the most serious problem for 31% of the respondents in the study conducted by Otunga *et al.* (2001) among women entrepreneurs in Eldoret town (see also Kamau n.d.). I return to urban agriculture-related policies and harassment in Chapter 5.

The political context

Participation by the poor in decision-making within local governance institutions is hailed as a prerequisite for efficient delivery of services and equitable redistribution of power, ostensibly because it ensures that local affairs are administered in line with local felt needs as expressed by the people themselves. In fact, poor people's participation in making decisions that affect their well-being is considered not only as empowering in itself, but also as "an essential ingredient to notions of democratic citizenship and sustainable development" (Mercer 2002: 102).

The EMC is the primary local governance institution responsible for the delivery of essential public services in Eldoret town. However, some respondents viewed EMC as an institution remote to them, and one whose policies did not resonate with their needs. Indeed, as shall be demonstrated in Chapter 5, there seemed to be minimal dialogue between EMC and residents of Langas, as expressed, for instance, by the respondents' lack of accurate information regarding EMC policies on urban agriculture and their acquisition of information on EMC policies from channels other than EMC itself. Respondents complained about EMC's harassment and brutal enforcement of council by-laws and policies such as poisoning of pigs and destruction of roadside kiosks, and non-provision of essential services. Langas is not connected to the municipal sewerage system, lacks

garbage collection and disposal services, and has no single public school or public health centre. Commenting on the apparent disconnect between EMC's policies and urban farmer's interests, a focused-group-discussion participant noted thus:

Why should the Council outlaw livestock keeping on the pretext that animal waste makes the town untidy when human waste is spilling all over Langas. Which is better; animal waste or human waste? The Council has not been able to fix the sewage system and cases of burst sewers are common in the town. They should fix the problem of sewers before talking about animal waste messing up the town.¹⁵

The residents' sense of powerlessness vis-à-vis the EMC was further amplified by a general lack of robust interest groups and civil society organizations within the area that could afford them a voice and through which they could lobby the EMC and other local institutions on matters of interest to them. At the time of the first phase of the fieldwork for this study in 2007, pig farmers were in the process of forming an association to represent their interests; three years later in 2010 during the third fieldwork, the idea had not yet come to fruition. Similarly, there did not seem to be any initiative to organize petty traders operating in Langas, despite common incidents of harassment and difficult working environments.¹⁶ Nyakaana (1997: 98) attributes the lack of political and economic organizing among informal sector entrepreneurs in Eldoret to "[t]he low status and economic dependence of many of the informal sector occupations, combined with the intensely competitive individualistic mentality" of the entrepreneurs. One could also argue that effective mobilization of the informal sector operators and the local community in general into collective action in pursuit of economic and development interests is less likely in a context of deep-seated inter-ethnic suspicions and antagonisms such as was the case in Langas.

Like in other highly politicized multi-ethnic settings in the country, and more so in urban areas, sectarianism determines patterns of social and geographical interaction as well as mutual communication and political action more profoundly than shared local problems and interests *per se* (Simiyu 2008). Especially in the context of electoral competition, inter-ethnic suspicion can explode into violent conflicts as was witnessed in the context of the December 2007 elections and its aftermath. For reasons related to ethnic diversity and historical land grievances, the Rift Valley province and major urban areas have always borne the brunt of election-related ethnic violence. With regard to the particularly devastating post-election violence of 2008, the Kalenjin (who dominate North Rift region) overwhelmingly supported the opposition candidate, Raila Odinga against his rival Mwai Kibaki. Immediately Mwai Kibaki was declared to have won elections –

¹⁵ In a focused group discussion with village elders, held on 31 August 2007.

¹⁶ Informal interviews with village elders and traders in Langas.

contrary to many opposition supporters' and observers' belief that Raila Odinga had won – Odinga's Kalenjin supporters turned against Kikuyus (Mwai Kibaki's co-ethnics), in particular, for their presumed support for the incumbent. It must be remembered that the Kalenjin have historically resented Kikuyu settlers in Rift Valley, for allegedly migrating into the province and taking away their land with government facilitation under both presidents Kenyatta and Moi.

Given its multi-ethnic nature and having a substantial presence of Kikuyus, Eldoret, the largest town in the Kalenjin-dominated North Rift region, fast turned into the epicentre of the region's post-election violence. Many people were displaced from their homes, others killed, many more injured, property destroyed and businesses looted and people's livelihoods devastated. Many residents of Langas recounted how marauding gangs took away their livestock from the grazing fields or how the gangs broke into compounds to steal sheep and chickens, ducks, etc. sometimes as they looked on. Others fled their homes for safety and came back only to find the homes had been broken into, property stolen, and their gardens destroyed.

Redempta¹⁷ separated with her husband many years back. The 47 years-old single woman had nine children, including six orphans. She owned one-eighth of an acre. To sustain her family, and without the help of a spouse, Redempta practiced intensive farming on her plot – a fact she took pride in saying she had used the plot the best way she knew how. She grew more than ten different types of crops. Apart from *sukuma wiki*, most of the farm produce was used for home consumption. Before the post-election violence, Redempta had allegedly kept 200 chickens (the traditional variety), over 180 ducks, 30 sheep and some doves (the scale of her activities then was corroborated by the village elder). For her, the main reason for taking up farming was to ensure that the 'children have food, they go to school and clothe'. She kept chickens primarily for raising school fees. On the other hand, she planned to sell some sheep in order to buy a dairy cow so she could save on the cost of buying milk. The rest of the sheep would cushion her against emergencies – she would easily sell sheep in case there was an urgent matter to address. Redempta had been keeping ducks since 1996 and sold them mostly in December to buy Christmas clothes for her children. Unfortunately, people stole her livestock during the skirmishes. They stole all the chickens and ducks. Out of the 30 sheep, only one was spared by the roaming gangs. By the time of the interview, her stock had started growing once again. She had four sheep and six ducks.

Prior to the post-election violence, Gitau had six goats and about 30 chickens, which he kept on his then well-fenced half-acre plot. He had kept the goats primarily as a store of cash which he could easily dispose of in case of an urgent need for money. He also had a vegetable garden on which he grew *saga* (spider plant) and *sukuma wiki* (kales). Sometimes he would grow maize which would give him about six sacks, enough to last the family about four months. He however, preferred growing vegetables on the plot because they not only saved the household money but also provided a regular income for household expenditure. The vegetables used to generate between Kshs. 100 and Kshs. 150 per day for most of the year. However, during the post-election violence of early 2008, people destroyed his fence, took away his goats and chickens and destroyed his vegetable garden. Following this incident, Gitau did not do any farming for the rest of the year, during which period 'feeding the family was hard'. In 2009 he decided to plant maize on the plot, about which he lamented:

¹⁷ Interviewed on 26 May 2009.

“Now I have been buying vegetables throughout and I can’t get the money I used to get. My business is also down. The problem with maize is that you only harvest once in a year. I am still organizing myself to fence the plot once again before planting vegetables. So I will continue buying vegetables.”

Other urban farming households were affected by the violence differently. For instance, while Makori¹⁸ was not exposed to direct theft by violent gangs, he nonetheless lost his chickens too.

During the skirmishes, Makori and his family were confined in the home for several weeks by insecurity. As such, they could not find feeds for the chickens, on which the family also turned for food because it could not access alternative sources of food. Once Makori realized that the violence was widespread and the chickens would not survive for long, he and his wife decided to slaughter about 30 chickens which they smoked and preserved for household consumption during the time of insecurity. Only about five chickens were spared. At the time of the interview in 2009, the household had about 15 chickens and 40 chicks.

Photo 4.1 Counting the losses: Displaced residents of Langan estate in Eldoret check through the ruins of their dwellings, which were razed down in the 2007/8 post-election violence.



¹⁸ Interviewed on 30 May 2009.

Photo 4.2 An encampment of the post-election internally displaced persons (IDPs) located within agricultural society of Kenya's Eldoret showground.



While some urban farming households were able to rebound from the shock and rebuild their livelihoods after normalcy returned to Eldoret, some remained destitute for longer periods while others were not even able to return to their former homes for fear of fresh attacks. It was also evident that the events of the post-election violence had forced some households to rethink their livelihood strategies, with multi-locality being one option to guard against similar devastation in the future. I substantiate these with the following two narratives, the first of which is adopted from a Habitat for Humanity Kenya report, while the second is based on personal interviews:

I am 70 years old and a mother of five children though not living with them at the moment. I am now living with three of my grandchildren since we came here in Maai Mahiu IDP (internally displaced persons) camp two years ago (in 2008) (...) after we were displaced from Langas by the post-elections violence of 2007/2008. By then, I was selling vegetables in Eldoret which were giving me substantial income enough to support my family. In my entire life, it never came into my mind that Kenyans could turn against each other. We were beaten and our properties looted while others burned. It was a dark moment in my life. We had to seek refuge at Langas police station for a period of one month before (the) government took us to Eldoret showground where we stayed for one year. In March 2009, the government through the *Rudi Nyumbani* (literally: return home) programme gave us Kshs. 35,000. We did not want to go back home for fear of been (sic) attacked again; so we pooled resources together and (...) bought a piece of land in Maai Mahiu area and pitched our tents there. Since we had no other resources left, we had to contend with the daily hardships of living in

the tent. (...) [Before Habitat for Humanity Kenya offered assistance] I had lost hope of ever owning a house again in my life.

(Nyaroiro Gatonye, adopted from Habitat for Humanity Kenya)¹⁹

During the violence that broke out after elections, I lost nine big sheep. They had gone out to graze but were taken away and slaughtered by rioting gangs. Only two managed to return. It was so risky you couldn't go out in the field. We also voluntarily gave out one of the two sheep that had remained to young men from our ethnic community so they could defend us. There was no food and no money so members of our community from this section of Langas decided to contribute whatever we could afford for our own security. I have since learnt a big lesson. I no longer feel safe in Eldoret. (...) I recently managed to secure a loan of KShs. 50,000. I had applied for the loan before the violence broke out. I intended to invest the money in a business which I had not fully decided on. Because of what happened to us last year I decided to bank the money. We are planning to sell our plot in Kipkenya settlement (the settlement is located within Eldoret municipality) and add the KShs. 50,000 so that we may purchase another plot in a safer place like Nakuru town. We will relocate our mother-in-law first as we continue to monitor the situation in Eldoret. If it deteriorates like last year then we will also move to Nakuru. If the situation improves then we will stay but we will at least have somewhere safe to go to in case of any problems in future.

(Njeri, 19 May 2009)

The socio-cultural context

In mapping the social context for urban farming households, attention is drawn to social norms and how men and women relate to them in the process of making a living. Also considered here are farming households' social security arrangements and social mobilizing and networking.

Cultural norms and gender relations

Most respondents agreed that there were certain cultural norms that determined which responsibilities each sex had and which tasks they performed within the household context. In many Kenyan cultures, traditionally men were the breadwinners for their households. Their responsibility was to provide food for their families and to ensure the sustainability of household livelihoods more generally. They were expected to 'go out' and search for food and/or the means with which the family could access food and other resources for well-being. On the other hand, women were expected to 'stay home' and to concentrate on reproductive and home management responsibilities, including taking care of their husbands and children. As a natural derivative of the role of breadwinner, respondents also seemed to uphold the cultural norm that designates men as the main decision-makers for their households.

It was clear from in-depth household interviews, however, that a rigid observance of traditional norms was no longer tenable within the changing economic

¹⁹ Habitat for Humanity Kenya, *Internally Displaced Family profiles*, available at: http://www.ktf.co.ke/documents/Kenya_Tourism_Federation_Thank_you_family_profiles.pdf.

environment. Men and women alike noted that the prevailing socio-economic hardships had overwhelmed men in their role as breadwinners for their families. Narratives abounded of men who previously provided for their families no longer being able to do so – either as a result of rising commodity prices against a back-drop of stagnating incomes, diminishing job opportunities, or redundancies. As such, they recognized not only the need to diversify their income sources, but also the role of women in contributing towards household sustenance (see Chapter 6). Women, in particular, noted this urgency as the basis for their (desire for) involvement in income-generating activities, some of which were located beyond their domestic sphere. As one woman remarked:

Nowadays everybody tries to look for a means of earning a livelihood for the household. You cannot just rely on the husband to bring food home. Sometimes men find themselves in a position where they are unable to provide for their families so women must work hard to fill the gap.

(Njeri, 19 May 2009)

This is consistent with much of the literature on informalization and feminization of labour that gained greater significance in the wake of economic restructuring in many African economies in the 1980s and 1990s, and which seem to have persisted as many economies continued to stagnate while the growth of their populations and labour force remained on an upward spiral. In many cases, women's activities became important supplementary income sources to their husbands'. In other cases they became the main sources of income for the households, making women the 'real' breadwinners for their families.

Social security

Many poor households in Langas lacked access to formal social security and welfare programmes. The exception to this was the case of displaced victims of post-election violence who received some humanitarian support from the government and non-governmental organizations. The support was mainly in the form of emergency relief food and temporary shelter and medication during displacement, and financial support and agricultural inputs to rebuild their livelihoods thereafter. However, the support was short-lived and for many victims of post-election violence, it was slow to come and too inadequate to rebuild, let alone sustain their livelihoods.

Poor households in Langas were also exposed to other shocks which, while not as dramatic as the post-election violence, are nonetheless as devastating to the livelihoods of the poor who lack formal social insurance and access to safety nets. For instance, household in-depth interviews revealed how ill-health (and resultant death) cost some poor households more than just catastrophic expenditures; it actually deprived them of labour and depleted other capital stocks. As

the testimonies of Margaret and Akinyi below show, the effects of ill health (and especially death) can be particularly devastating to household livelihoods where the main breadwinner for the household is involved. In the absence of formal security and welfare programmes, and given their limited financial capacity and capital portfolio, the poor often turn to their social relations for support in times of need. Various types of social networks were identified in Langas, among them rotating savings and credit associations (ROSCAs) and credit associations mainly formed for purposes of accessing credit from micro-finance institutions. Both these groups were rooted in relations of trust that developed from localised interactions in the neighbourhoods or, and to a lesser extent, wider ties in the marketplace. They were usually small and primarily addressed individual needs of their memberships. As shall be demonstrated in Chapter 8, these groups were instrumental in enabling members to access financial capital for smoothing consumption and for investment as well as social support in times of need.

Margaret's husband, a former college tutor, was the main breadwinner and decision-maker for the household. He owned most of the family property, including the plot and rental houses. The plot measuring three quarters of an acre was bigger than the average plot size in Langas. The husband had constructed a permanent family house and additional three rooms which he rented out to tenants at a monthly rate of Kshs. 1,500 each, and planned to construct more rentals. Most of the remaining space was used for urban farming. Margaret was responsible for farming, an activity that she said she enjoyed doing, not only because of its economic value, but also because of her farming background. She cultivated different types of crops on her plot including *sukuma wiki*, Napier grass, and traditional vegetables like *suja*, and *saga*. The household also kept two dairy cows, which produced milk for home use as well as for sale, and had 10 chickens which produced eggs. Apart from farming, Margaret also had a stall in the municipal market where she sold vegetables, some of which she got from her own plot. She had been doing the business since 1989. On a good day she could earn an income of between Kshs. 500 and Kshs. 700.

With the income from farming and from her stall, Margaret was able to 'take care of many small things in the house' without relying on her husband, who now concentrated on development such as housing, and met bigger expenditures such as school fees for their son. Although he had retired, he used to receive some pension and he had started the process of claiming his retirement benefits. When her husband fell sick and his health deteriorated in 2007, Margaret closed her business in the municipal market to take care of him. She sold the two cows to settle the hospital bill since they had no other means of raising money. She also sold some of the chickens to buy medicine and slaughtered the rest to enrich his diet. She sought assistance from her husband's former employer and workmates regarding his retirement benefits without much success. She found the process cumbersome and complicated: "I tried to ask the people he was working with but I did not get clear answers. They referred me to places and offices I do not even know. They told me to look for a lawyer and I am told lawyers are very expensive and I don't have the money to pay them. My in-laws are not keen on helping me. So I just have got no idea how to go about it. Maybe when my son finishes college and we get money he will start following up the matter."

Without her husband and any external support, Margaret was left to entirely rely on her plot and rent for survival as well as paying college fees for her 25-year old son. She also lived with eight relatives who depended on her. She particularly relied on *sukuma wiki* which earned her at least Kshs. 200 per day throughout most of the year. After selling her cows, she also had to buy milk on a daily basis which she could not afford. Initially she was getting

milk from her neighbour. The neighbour relied on her plot for Napier grass so he would give her some milk in return. Unfortunately the neighbour's cow died, so she could no longer take the 'good tea' she was used to previously. Margaret said she couldn't afford to carry on her husband's plans of putting up other rental rooms on her own. Aware of her vulnerability, she regularly tithed in church – an amount of Kshs. 50 every month – because as she put it, "I know that in times of need the church would come in to help."

Akinyi (67 years old), was widowed in 1990. All her children were married but she stayed with seven grandchildren who depended on her. She stayed in a rented house which sat on one-quarter of an acre. She paid rent of Kshs. 2,500 and cultivated the space around the house, which she had been doing even when her husband was still alive. Akinyi also sold *mitumba* (second-hand clothes) which she described as a 'very profitable' business. On a market day she could earn up to Kshs. 2,000. She then used the income from the *mitumba* business to buy beans from the village and sell at a profit in Eldoret. With a regular income from her *mitumba* business, Akinyi was able to join a 25-member ROSCA where they paid Kshs. 150 weekly. She was the ROSCA's chairperson.

Although she was cultivating the plot and engaged in business, her husband was the one who provided for the household and paid school fees for their children. However, after his death, Akinyi took up all the responsibilities. Soon she ran out of money, could not replenish her stock and eventually her *mitumba* and beans businesses collapsed. Unable to afford weekly ROSCA contributions, Akinyi pulled out of the ROSCA altogether. One of her children had promised to help her restart the *mitumba* business but she died in 2008, leaving her 'helpless'.

Akinyi now relied entirely on urban farming to sustain her household. She grew different types of vegetables on her plot, including *sukuma wiki*, *saga* and cowpeas. She earned at least Kshs. 100 per day, although there were days she did not make any sales. She used the money on household expenditure and met school-related requirements for her grandchildren. Besides the vegetables, Akinyi also grew maize and kept two chickens. She harvests about one-and-a-half bags of maize every year, which could take the family for about two months before she starts buying maize. On the other hand, the eggs produced were primarily for home consumption. Akinyi noted that sometimes she could not afford fertilizer and that the money she made from her plot was not enough to pay rent and cater for other family needs. She was lucky though that her long-time landlady, who was then working in Nairobi, had not only come to understand her predicament but to also empathize and develop close relations with her. As such the landlady had decided that Akinyi would continue staying in the house and to take care of her plot – as the latter looked for an alternative accommodation – until she relocated from Nairobi on retirement expected in about five years thence.

Also identified among social networks were ethnic-based associations formed by and for members of particular ethnic communities, mainly for social support and mutual aid in times of calamities such as death. Church-based groups and congregations also constituted important networks of social support and mutual aid. As has been noted in the preceding sections, more robust and broad-based interest groups transcending sectarian divisions were rare to come by in Langas. As was evident during the December 2007 elections and the events that followed, ethnic differentiation and inter-ethnic antagonism in the area engendered by national political power struggles was a source of great shock to the well-being of many households.

The environmental context

As has already been noted, and like in many other informal settlements of Eldoret, Langas was not serviced by the sewerage system, and garbage collection and disposal services were non-existent. Residents used pit latrines and sometimes disposed of human waste and garbage anyhow in open spaces. Kimani-Murage & Ngindu (2007) report that up to 30% of the children in Langas used open spaces as disposal sites for human excreta. Such an environment poses health risks to not only humans, but also livestock. Many livestock keepers practiced free-range grazing in open spaces within the municipality; even those who confined their animals heavily relied on fodder obtained from open fields, on road reserves and along plot edges. As explained by a veterinary officer, such animals are exposed to tapeworm infection, which may be passed on to humans through meat consumption.²⁰

For pig farmers like Obachi, the non-collection of garbage meant that they could access the ever-present household food wastes from people's compounds to feed their animals whenever they could not afford market feeds. However, according to Obachi's own admission, this was achieved at the expense of personal dignity:

Sometimes when I don't have money to buy feeds for my pigs, I wake up very early in the morning, before people start waking up, to scavenge for food remains in dustbins in people's compounds. Sometimes people think I am a *chokora*²¹ but that does not bother me because my pigs are my biggest investment.

(Obachi, 6 June 2009)

In terms of water supply, the area was well-connected with piped water and many residents had dug shallow wells on their plots. However, wells were exposed to contamination especially from fecal matter due to overflow of pit latrines during the wet season (Owuor & Foeken 2009), but also from surface runoff and underground pollution due to close distances between pit latrines and the wells. From their laboratory analysis of water samples from shallow wells in Langas, Kimani-Murage & Ngindu (2007) found out that all the samples were heavily contaminated with fecal matter and did not meet WHO standards of safe drinking water. They also found out that in 40% of the cases, the distances between pit latrines and wells were less than the recommended 15 metres. Other possible causes of water pollution were identified as defecation by livestock around wells and poor sanitary practices such as washing clothes next to the wells, drawing of water using dirty containers, and non-protection of wells.

²⁰ District Veterinary Officer, Uasin Gishu District, interviewed on 28 August 2007.

²¹ Kiswahili word for street children, often used pejoratively to refer to someone looking dirty and untidy.

Thus, although shallow wells were sources of water for irrigation and animal watering, residents of Langas who relied on shallow wells for drinking water were exposed to water-borne diseases. Yet, the absence of public health facilities had left the residents with the option of seeking services from private clinics, which by definition are expensive and beyond reach of the majority of the poor. When individuals are exposed to public health risks and cannot access health services, human capital is jeopardized.

Weather patterns also posed ecological challenges for urban farming households in Langas. Several farming households had suffered crop failure and a decline in productivity and loss of livestock due to drought or adverse weather. On the other hand, due to the swampy nature of some parts of Langas, on the one hand, and poor drainage on the other, water logging and flooding was a common feature of Langas during the wet season. Cases of livestock deaths due to disease outbreaks were also common especially among poultry-keeping households. These, and other problems facing urban farmers, are the focus of Chapter 7.

Land tenure

Land tenure regime

Two main types of tenure systems were identified in Eldoret, as in many other urban centres in Kenya. The first one is private leasehold/freehold which vests land ownership rights to individuals, groups and private institutions. Much of the land in Eldoret municipality – estimated at between two-thirds (Musyoka 2004) and four-fifths (Olima & Obala 1999) – was held under this arrangement. Such land was largely brought under the jurisdiction of the municipality following outward extension of municipal boundaries to respond to the needs of urban growth. In the leasehold system, the owner holds title to the land for a specified period of time (usually 99 years) and is expected to utilize it only for purposes for which it was allocated and in accordance with the regulations and conditions specified by the state or the local authority. On the other hand, freehold tenure confers, in theory, absolute ownership and use rights to the land owner, who may use it without any restrictions. However, in practice, some urban planning regulations may, and often do, place limitations on such freedoms.

Private freehold was the main source of land supply in Eldoret town against the town's ever-rising demand for land occasioned by rapid population growth. However, the formal process of land transaction, transfer and registration is stringent and cumbersome. Consequently, the majority of urban land seekers use informal channels in order to access land from private landowners. These channels are more flexible and less complicated so that land seekers can buy plots of the sizes they need when they need them and at prices and terms of payment they

can afford. While informal land transactions are particularly attractive to land seekers from low income groups, they are nonetheless also used by the non-poor (Musyoka 2004). This explains why non-poor urban residents were also found in Langas, despite its characterization as a low-income unplanned settlement.

The second tenure system involves public/government land, which the government holds in trust for the public. It is estimated to account for about 17% of land within Eldoret municipality (Olima & Obala 1999). Public land is mainly under the ownership of the government and government institutions (e.g. Kenya Railways) as well as the municipal council. Compared to private tenure, public land was by far a minor supplier of land to the urban land market in Eldoret. It is estimated that it supplies up to 10% of residential plots (Musyoka 2004).

From time to time the government alienates portions of land under its custody or acquires land from private owners for allocation. Such land is advertised and applications from interested members of the public invited. However, besides being complicated, long and winding, the process of land allocation by the government is mired in secrecy and corruption making it amenable to manipulation by the rich and the powerful to the exclusion of the deserving poor and those without political connections. To begin with, the channels of communication about availability of the land – the Kenya Gazette and daily newspapers – are not easily accessible to the poor for reasons of illiteracy and poverty. Moreover, such plots are often never advertised in the first place thereby excluding many would-be applicants who lack the information about their availability.

Land allocation programmes specifically targeting low-income groups have also been implemented in Eldoret by the municipal council (Musyoka 2004). The first such programme was implemented in 1972 involving 52 residential plots and the second in 1978 involving 96 low-cost housing units each with additional space for future development by the beneficiaries. Other two schemes were introduced in 1986. One of them supplied 571 plots and the other 653. Although these schemes were intended for the low-income groups, some wealthy and non-poor individuals benefited from the allocations at the expense of the poor. For instance, some deserving individuals could not even apply for land allocation in the second scheme because they could not afford application fees, let alone the required deposit and initial monthly rent. Similarly, poor beneficiaries of plots in one of the 1986 schemes were elbowed out of their allocations by rich individuals because the former could not afford to develop their plots to prescribed housing designs and standards. Again, the majority of urban residents in Eldoret do not have information about such land allocation programmes. Musyoka's study found out that only about 1% of the respondents did.

Besides exacerbating inequalities by limiting the low income groups' access to land while at the same time favouring the rich and powerful, these land tenure

systems have also impacted urban development in Eldoret variously (Olima & Obala 1999). While the freehold system is the main supplier of land for private land seekers, it has held back land supply for development of social amenities and infrastructure to meet urban growth needs. It has also frustrated land use planning by limiting urban planners' authority to enforce land use planning regulations and guidelines on privately owned land. Such frustration was aptly captured by one urban planner in Eldoret when he noted that "In so far as private landownership in urban areas is still permitted, there is no justification for the preparation of urban land use plans" (quoted in *ibid*: 118). As a result of these planning challenges associated with freehold land tenure system, haphazard land use patterns and unplanned settlements have emerged in the event straining the provision of social services and infrastructural development and leading to environmental degradation, especially in low-income areas such as Langa.

Land tenure in Langa

Settlement in Langa began in 1965 (Kimani-Murage & Ngindu 2007) on land measuring 1,050 acres (or 425 ha.). The land was purchased from a European settler by a land-buying company of 53 members from the Kalenjin community (Musyoka 2004). The land was initially subdivided into approximately 3,360 plots measuring about one-eighth of an acre each for sale (*ibid*). Subsequently, a dispute arose among the shareholders derailing the land adjudication and titling process. The dispute was referred to court for arbitration and at the time of writing it remained unresolved and the original settlers had yet to receive titles to their land. However, this has not stopped them from developing the land nor has the implied insecure tenure discouraged people from purchasing (and developing) land in Langa. Further subdivision and sale of plots has occurred subsequently, and development has proceeded without regard for municipal council and town planning regulations and guidelines. As a result, the settlement has developed haphazardly, hampering the provision of essential infrastructures and services. As has already been mentioned, the estate is not serviced by a sewage system; it lacks garbage collection and disposal services, and has no public schools or health facilities.

It must be pointed out that the insecurity of tenure in land has to some extent given the district's Department of Physical Planning some leverage over the patterns of development and especially land subdivision. The physical plans for the settlement were initially done by the department and all the plans and related records on plot attributes such as location, size and ownership remain in the department's custody. Since the owners lack titles for their plots and therefore have no documentary evidence of plot ownership, they have to seek the advice of the physical planning department whenever they want to sell land. Similarly, inter-

ested land buyers in Langas seek information from the department to ascertain the bona fide owners of the plots they are interested in. The physical planning department has used this leverage to restrict subdivision of land below one-sixteenth of an acre; this has created some order in Langas.

Implications of the land tenure regime for urban agriculture

Besides impacting urban planning, Eldoret's land tenure regime has had implications for urban farming by the poor as well. To begin with, and as has been implied above, access to public land for urban farming is limited for the urban poor who lack power and/or financial resources with which to gain favour of the municipal authorities in land allocation. However, the need for farming space has compelled the poor to invade vacant public spaces, in the process exposing themselves to harassment by the authorities. The undeveloped lands belonging to Kenya Railways and EMC were singled out as some of the areas commonly invaded by urban residents²² and on which EMC routinely destroyed farmers' crops.²³ It must be noted, however, that the EMC rents out some of its land for farming.²⁴ One such piece of land is located near the town's sewer treatment plant (see Map 3.3) and measures approximately 300 acres. Prospective urban farmers are required to apply to the EMC for plot allocation at a yearly rent of KShs. 1,000 per acre – a cost that is about five times cheaper than the market price. The vetting of applicants is based on one's ability to pay, and preference is given to individuals who reside near the farm. The maximum plot size one may be allocated depends on the number of successful applicants, who are usually many. However, the arrangements were usually done secretly and the process and procedures involved were unknown to many would-be interested urban residents. As with informal access to vacant EMC plots that requires information about the location and status of such plots, so it was with the formal access process that only those close to the farm and/or with EMC connections, and especially EMC employees themselves, had benefited. An officer of the municipal council²⁵ explained that publicizing such information regarding land allocations for farming would be misconstrued by the public to mean that the council encourages urban farming; an eventuality that the council supposedly fears would make farming in town to spiral out of control.

If private leasehold/freehold is the dominant tenure system in Eldoret, then the omnipresence of urban agriculture across the municipal space must similarly be attributed to the preeminence of private lands as suppliers of farming space. This

²² Senior Enforcement Officer, EMC, interviewed on 31 July 2007.

²³ Locational Extension Officer, Pioneer Area, interviewed on 22 August 2007.

²⁴ Director of Environment, EMC, interviewed 4 July 2007.

²⁵ *Ibid.*

should be so because the municipal council has limited mandate to both enforce its anti-urban agriculture policies and planning regulations on private lands, and to leverage the conversion of such lands – including those found within the town’s built-up area – to commercial use or public infrastructure development. There are many undeveloped plots within the town’s built-up areas, and several swathes of land are interspersed with built up areas as well. Whether such lands remain undeveloped because their owners lack financial capital or are held for speculative reasons, they provide an important source of farming space for the urban poor, who may access such spaces by squatting, through renting from landowners, or by entering into caretaking arrangements with the land owners.

The municipal council has also had to tolerate agricultural activities in traditionally agricultural areas when such areas are brought under its jurisdiction by periodic boundary extensions. Beyond having limited control over such private lands, EMC also recognizes the challenges associated with a cultural re-orientation from farming to commercial activities for many farming households; not to mention that the cost of making the transition is prohibitive for the poor. As an EMC officer put it, “if you do not allow farming in those areas, what would the owners of those large farms do with their farms?”²⁶

But the private land tenure system also poses its own risks to urban agriculture. Just as the land owners have undertaken farming on their private holdings against the municipal council’s wishes, so too have they put their plots to other livelihood activities that do not conform to EMC regulations and which compete with urban farming for space. For many landowners, construction of low-cost unplanned housing structures for own accommodation, but also to earn a regular income from rent, was the ultimate investment goal. This is because of the high demand for low-cost housing in such areas, the relative ease with which such houses can be put up, and the promise of a regular income from such one-off investments. The relative uncertainty of urban agriculture owing to climatic variability and seasonality as well as official restrictions against its practice underlined by a history of punitive actions against offenders has also made low-cost housing a preferred investment compared to urban agriculture. As a result, land owners continuously extended housing structures into any available space whenever they accessed financial resources thereby reducing farming space and rendering farming a more or less transitory activity for many landowners. As shall be demonstrated in Chapter 7, the implication of this is that many women face the risk of losing their means of livelihood in the long term.

The predominance of private freehold land tenure system also meant that although the poor stood to benefit the most from urban farming, the majority of

²⁶ Director of Environment, EMC, interviewed 4 July 2007.

them had limited access to land for farming because of a lack of financial ability to participate in the formal land market. Thus, the proportion of urban farming households was lower in the worse-off Block 3 than in the better-off Block 4 (16% versus 32%). As has been stated above, the informal land market is the only viable route to land ownership for the poor, while informal arrangements such as squatting and care-taking as well as inheritance were the other options of establishing entitlement over land for urban farming. Whatever the case, the plots accessed by the poor are usually small, uneconomic and of insecure tenure, and women are more disadvantaged. I return to the issue of access to land by the farming households in Langas in Chapter 7.

Photo 4.3 A farmer in Langas constructs a rental house on his plot. He previously grew *sukuma wiki* on the entire plot



The legal and policy context, and the politics of urban agriculture in Eldoret

This chapter demonstrates how the interplay of laws and policies at the national and municipal levels have shaped the context within which residents of Eldoret municipality strive to make a living from urban farming. The Chapter begins with a review of the national legislative and policy setting for urban agriculture in Kenya. It then shows how Eldoret Municipal Council (EMC) has interpreted this national framework in designing its by-laws and policies related to urban agriculture. This is followed by an overview of the power relations and politics underpinning the practice of urban agriculture and how these have engendered contradictions in the application of existing laws and policies within Eldoret municipality and frustrated the evolution of a more responsive legal and policy framework for urban farming at the municipal level.

The national legislative context of urban agriculture in Kenya¹

There exists a variety of national legislation relevant for urban agriculture in Kenya.² To start with, the Agriculture Act³ (Section 2) gives the following definition of ‘agricultural land’:

(...) all land which is used for the purpose of agriculture, not being land which, under any law relating to town and country planning, is proposed for use for purposes other than agriculture.

¹ This section is largely based on Foeken (2005), and partly on the Draft National Urban and Peri-Urban Agriculture and Livestock Policy (UPAL).

² In Appendix I of the *Draft National Urban and Peri-Urban Agriculture and Livestock Policy* (Ministry of Agriculture, May 2010), some 20 Kenyan laws with implications for urban agriculture are listed. Here we deal with the most important ones only.

³ Laws of Kenya: The Agriculture Act – Chapter 318, Revised Edition 1986. Nairobi: Government Printer.

This does not completely rule out the possibility of practising agriculture within a town's boundary. Any doubt seems to be taken away by the definition of 'agricultural land' given in Section 2 of the Land Control Act,⁴ namely "land that is not within (...) a municipality or a township". However, in the same section of the same Act, a provision is made to allow for urban agriculture because 'agricultural land' can also be

(...) land in Nairobi Area or in any municipality, township or urban centre that is declared by the Minister, by notice in the Gazette, to be agricultural land for the purposes of this Act.

Related to this, Section 29 of the Physical Planning Act⁵ provides "each local authority" the power:

- (a) to prohibit or control the use and development of land (...) in the interest of proper and orderly development; (...)
- (c) to formulate by-laws to regulate zoning in respect of use and density of development; (...)
- (f) to reserve and maintain all the land planned for open spaces, parks, urban forests and green belts in accordance with the approved physical development plan.

Crucial here is how a local authority defines "proper and orderly development" and whether there is room for agriculture as a form of urban land use in the "physical development plan".

Whereas these Acts offer the local authorities the legal provision for whether to allow urban farming or not, other Acts provide the framework to control the activity. The most important one is the Public Health Act,⁶ dealing with everything causing "any nuisance or other condition liable to be injurious to health". Section 118 of this Act defines nuisances in relation with animal keeping:

- (f) any stable, cow-shed or other building or premises used for keeping of animals (...) which is so constructed, situated or kept as to be offensive or which is injurious to health;
- (g) any animal so kept as to be a nuisance or injurious to health;
- (h) any accumulation or deposit of refuse, offal, manure or other matter whatsoever which is offensive or which is injurious or dangerous to health.

As for the cultivation of crops in town, Section 157 provides the Minister of Public Health, "after consultation with the Minister of Agriculture", with the power to prohibit this "(...) where it is shown (...) that the growing of any crop or the irrigation of any land being within the boundaries of a township or within three miles of such boundaries is unhealthful or insanitary (...)". This article provides also the legal backing for prohibiting irrigation with sewage water.

⁴ Laws of Kenya: The Land Control Act – Chapter 302, Revised Edition 1989. Nairobi: Government Printer.

⁵ Laws of Kenya: The Physical Planning Act – Chapter 286, Revised Edition 1996. Nairobi: Government Printer.

⁶ Laws of Kenya: The Public Health Act – Chapter 242, Revised Edition 1986. Nairobi: Government Printer.

Another section in the Public Health Act that is very important for urban crop cultivation is 168A, which deals with the breeding of mosquitoes and flies:

Every municipal council may (...) make by-laws for preventing and abating conditions permitting or favouring the breeding of mosquitoes and flies and, generally, for the prevention of malaria and other insect-borne diseases.

Although, on first sight, there seems to be no direct link with urban agriculture, this act – which dates from the colonial period – provides the basis for prohibiting maize growing in town on health grounds, as mosquitoes are supposed to breed in the water that assembles in the axils of the plants.

Obviously, the Public Health Act also deals with “pollution related to health”. For instance, Section 130 provides the Minister with the possibility to prohibit the erection of, for instance, “stables, cattle-kraals (or) pig-sties” and the deposit of “any manure” likely “to entail risk of harmful pollution”. And Section 129 imposes on every local authority the duty to prevent “any pollution dangerous to health of any supply of water”. Pollution of water is also included in the Water Act,⁷ where Section 94 states that

(...) no person (...) shall throw (...) any rubbish, dirt, refuse, effluent, trade waste or other offensive or unwholesome matter or thing into or near to any water resource in such manner as to cause (...) pollution of the water resource.

Thus, both the Public Health Act and the Water Act provide the legal framework for forbidding the use of, for instance, chemicals in urban agriculture.

Perhaps the most important national legislation in relation to urban agriculture is the Local Government Act.⁸ It provides the local authorities with full decision-making power in relation to crop cultivation and livestock keeping within the municipal boundaries. For instance, Section 144 states that

[A]ny land belonging to a local authority (...) may (...) be appropriated for any other purpose for which the local authority is authorized to acquire land.

In other words, by means of urban-agriculture-friendly by-laws, a local authority may invoke this Act to temporarily provide its urban dwellers with land for urban agriculture. More specifically, Section 155 provides that every municipal or town council “shall have power (...) to engage in livestock and agricultural undertakings” and

(...) to require the planting of any specified crops by persons for the support of themselves and their families *in areas which in the opinion of the (...) council are suffering from or likely to suffer from shortages of foodstuffs*. (author’s emphasis)

⁷ Republic of Kenya: Kenya Gazette Supplement No. 107 (Acts No. 9), The Water Act, 2002. Nairobi: Government Printer.

⁸ Laws of Kenya: The Local Government Act – Chapter 265, Revised Edition 1998. Nairobi: Government Printer.

In other words, if willing, the Municipal Council has the legal possibility to engage in or to allow crop cultivation by the (very) poor and in areas where these poor are living. However, growing crops on land that does not belong to the cultivator – which can be quite common – is illegal. Every municipal or town council has, according to Section 154, the power

(...) to prohibit the cultivation by unauthorized persons of any unenclosed and unoccupied land in private ownership and of any government land and land reserve for any public road.

Another provision to forbid, restrict or control crop cultivation is offered in Section 160, stating that “every (...) council shall have power to plant, trim or remove trees, flowers and shrubs in or on any public space”. This may seem a rather harmless act in relation to urban crop cultivation, but not anymore when vegetables are considered as ‘shrubs’, as a mayor of Nairobi once did. The Local Government Act also provides the legal framework for the ban on sewage water for irrigation, because for instance Section 173 states that “any person who (...) makes or causes to be made any opening into any (...) sewer (...) shall be guilty of an offence.” And, like crop cultivation, the local authorities can also “prohibit or control the keeping of animals, birds and bees so that their keeping shall not be a public nuisance or injurious to health” (Section 162).

In sum, according to the national legislation in Kenya, urban agriculture can be forbidden, restricted, allowed, controlled, facilitated or even promoted. Which line is actually followed at the local level depends entirely on the by-laws and ordinances made by the local authorities. The local authority’s power to draw up such a local legal framework is provided by the Local Government Act, while the various other Acts discussed above form the legal handle for the provisions made in these by-laws.

The local context: Legal and policy framework for urban agriculture in Eldoret

Crafted on the basis of “the manoeuvring space allowed by national legislation” (Foeken 2008: 239), the legal and policy framework for urban agriculture in Eldoret is reflective of the confusion inherent within the national framework. It is restrictive and punitive in respect of certain urban agriculture activities, tolerant or permissive to others, but in most part ambivalent. Overall, the legislative framework for livestock keeping is clearer compared to that for crop cultivation.

Livestock keeping

The latest set of EMC by-laws (approved in 2009 by the Minister of Local Government) makes a wide range of specific provisions relating to livestock-keeping in the town. The General Nuisance by-laws prohibit livestock-keeping where the

animal or poultry involved “is a nuisance to any of the residents in the neighbourhood”.⁹ In any case and except for poultry,¹⁰ a person can only keep livestock in town if and when granted permission by the municipal council and shall do so in adherence to any conditions that may be laid down.¹¹ However, according to the EMC Director of Environment,¹² under no circumstances is livestock keeping within built-up areas allowed. With regard to peri-urban areas, prospective livestock keepers must specify the exact number of animals they intend to keep when applying for a permit; usually the number allowed is determined by the farmer’s plot size. If granted permission, the farmer is further required to confine their animals within their compounds, preferably under zero-grazing.

The General Nuisance by-laws also prohibit the grazing of animals in planned areas¹³ as well as the roaming of animals and birds in town on account that they may “cause obstruction or inconvenience to traffic”.¹⁴ The Parking Spaces and Omnibus Stations by-laws specifically out-law the wandering of livestock within parking spaces and omnibus stations. EMC officers also distaste wandering animals and grazing of animals in town, presumably because they destroy gardens and trees, damage urban infrastructure and defecate in town thereby impeding urban beautification and greening. They are also considered a public health risk. The Chief Public Health Officer¹⁵ pointed out that although no particular disease outbreak has previously been attributed to livestock keeping within Eldoret town, the outbreak of African swine fever disease in 2006 that swept out almost the entire pig population in town was indicative that the health risks of keeping pigs in town are real. The disease is highly infectious and can affect humans.

From time to time the EMC has confiscated roaming animals and meted out penalties to offenders. Because of their scavenging habits, pigs are particularly distasted. They are considered dirty, a big nuisance and a risk to public health and traffic. For this reason EMC has previously decimated pigs by way of shooting and poisoning. For instance, in 2003/4, EMC collaborated with the veterinary department, the provincial administration and the police to kill (by shooting) several marauding pigs in the town.¹⁶ Asked whether they had ever been personally

⁹ The Municipal Council of Eldoret (General Nuisance) by-laws, 2009, (paragraph 7 and 8).

¹⁰ Although the by-laws do not expressly provide that poultry can be raised in town, this can be inferred from the fact that poultry is not mentioned among the livestock for which one requires permission to keep viz: ‘ox, bull, cow, goat, sheep, or pig’.

¹¹ The Municipal Council of Eldoret (General Nuisance) by-laws, 2009, (paragraph 8).

¹² Interviewed on 4 July 2007.

¹³ The Municipal Council of Eldoret (General Nuisance) by-laws, 2009, (paragraph 8).

¹⁴ The Municipal Council of Eldoret (General Nuisance) by-laws, 2009, (paragraph 8).

¹⁵ Interviewed on 26 July 2007.

¹⁶ According to the EMC Director of Environment, this action in which between 20 and 30 pigs were killed, was not meant to decimate all pigs in the town, but rather to scare pig farmers so they could

harassed or witnessed another urban farmer being harassed by EMC officers within five years preceding the survey, 46% (N=200) of the respondents surveyed said they had, with men being more likely than women to say so (74%, N=72 versus 30%, N=128). Of these, 44% of such incidents had involved confiscation of roaming livestock, particularly cows (22%) and pigs (21%), while 45% involved killing of the animals (pigs in all cases). Interviewees in Langas also recounted suspected baiting/poisoning of roaming pigs by EMC officers sometime in 2006/7. Mhubiri, a pig farmer for whom the keeping of pigs constituted an important source of income for him and his household, recalled how he lost eight pigs at the time over a period of three days. He estimated his loss at 60,000 Kenyan shillings (Ksh.),¹⁷ a considerable level of asset depletion for a household within a Ksh. 5,000-10,000 monthly income bracket.

Other relevant by-laws include the Control of Stock by-laws, which stipulate conditions under which stock may be allowed to graze in town, e.g. when such stock are awaiting slaughter, or exhibition in the Eldoret agricultural show-ground, or are impounded by the Council.¹⁸ The by-laws also prohibit the use of “any building or other premises or place within the Municipal Council of Eldoret (...) as cattle shed or pigsty or as other place for keeping sheep, goats or pigs without Council authority”.¹⁹ One wonders what the implication of this is, given that that is what many urban farmers do. Finally, paragraph 7 of the same by-laws stipulates that keeping livestock is prohibited “under any portion of any building or other premises or place used for purposes of human habitation with Municipality planned areas”.

It is perhaps the General Nuisance provisions related to milk and dairies that demonstrate just how stifling a legal framework for urban livestock keeping can get. The following are some of the provisions:

No person other than the company registered by the government for the purpose shall sell milk or fresh cream in the Municipality unless such a person is a licensed purveyor of milk and the milk or cream has emanated from a source approved by the Council or has not been sold by the Council (paragraph 60);

No licensed purveyor of milk shall sell milk for human consumption in the Municipality unless such milk has been pasteurized, and transferred, immediately after pasteurization, to a sterile approved container and therein sealed to the satisfaction of the Council (paragraph 61);

No milk may be pasteurized within the Municipality unless such milk (is) from a source approved by the Council; provided that all milk, other than that emanating from a source approved by the Council, produced in (...) the Municipality for sale or for consumption shall

confine their pigs. He noted that, in any case, the municipal council did not have the capacity to handle pig carcasses were all marauding pigs to be killed. Interviewed, 4 July 2007.

¹⁷ At the time, Ksh. 100 was about 1 Euro or Ksh. 80 was about 1 US\$.

¹⁸ The Municipal Council of Eldoret (Control of Stock) by-laws 2009, paragraph 4-5.

¹⁹ Paragraph 6.

be delivered for inspection and testing to the Municipal dairy within such hours as may be determined by the Council (paragraph 64);

No doubt these are overly stringent measures whose strict enforcement would almost certainly phase out dairy farming by poor small-scale urban farmers in town. That most of these 2009-approved by-laws are a replica of by-laws in Kisumu town that came into effect in the early 1950s before Kenya's independence (see Mireri *et al.* n.d; Ishani 2009) underscores the inertia within EMC to modernize its legal and policy framework in line with new challenges and problems of urban planning and food security in Eldoret. It is important to note that even when a prospective urban farmer satisfies all conditions as may be set out by the municipal council in respect of a livestock enterprise for which he/she applies to undertake, "the Town Clerk may, in his absolute discretion, refuse to issue any permit."²⁰ Under circumstances where senior EMC officers have expressed contempt for and displeasure with urban farming, sometimes calling for tougher penalties against its practitioners, such a provision does not augur well for urban farming in Eldoret.

Crop cultivation

At the time of the fieldwork for this study (2007-2010), not a single written by-law related to urban crop cultivation could be traced in municipal council. Neither the department responsible for enforcement of by-laws nor the other relevant departments of planning, environment and public health had a compilation of relevant by-laws. An EMC Enforcement Officer confessed that he had never seen written by-laws related to urban crop cultivation since he started working in the Enforcement Department in 1996!²¹ However, all EMC officers and councillors we spoke to spoke of *this* or *that* activity being allowed (and the conditions to be fulfilled) or outlawed, often in a matter-of-factly fashion. Moreover, they all seemed to agree on the need to update the by-laws (implying they existed!) to bring them in tandem with the changing times, as had started happening elsewhere. In particular, they pointed at Nakuru Municipal Council's example as worth emulating.²² It is noteworthy that the Nakuru Municipal Council has in recent times instituted measures aimed at legitimating and regulating urban agriculture within its jurisdiction (Foeken 2008).²³ In the case of EMC however, some

²⁰ The Municipal Council of Eldoret (Control of Stock) by-laws 2009, paragraph 11.

²¹ Interviewed in May 2010.

²² Acting Assistant Town Clerk, EMC, interviewed on 26 July 2007; Senior Enforcement Officer, EMC, interviewed on 31 July 2007.

²³ The Nakuru Urban Agriculture by-laws were a direct result of a study on urban agriculture carried out by the University of Nairobi and the African Studies Centre, Leiden, The Netherlands (see Foeken & Owuor 2008).

officials argued instead for a review of the by-laws with a view to imposing stiffer penalties to curb urban farming. As one official explained:

Some by-laws are old and need revision. More punitive penalties should be given to urban farmers. Currently, offenders are fined a very small amount of up to only Ksh. 200, so they always come back to continue with farming activities because they can easily afford the fine.²⁴

By and large, whether an urban agriculture activity was outlawed, controlled, frowned upon, allowed or simply tolerated depended on the type of the activity and its location, and on the perceived environmental, security and public health concerns implied.

It was noted that the growing of tall crops (those that can rise to more than one metre, e.g. maize) in the built-up areas is prohibited supposedly because they create bushes which can provide hide-outs for thugs. To underline this concern, EMC's Senior Enforcement Officer explained that incidents of insecurity reach their peak during the months of August, September and October, when the maize has gained its maximum height.²⁵ On account of this security risk, EMC in the past resorted to slashing down maize crops in open spaces in town as a deterrent measure against its cultivation, but such cases are said to be rare nowadays.²⁶ Of the 91 incidents of farmer harassment referred to above, a negligible proportion (3%) involved crop cultivation with only one incident of maize slashing suffered/witnessed within 5 years preceding the survey.

On the other hand, short crops like beans and vegetables, while not prohibited, would not be openly encouraged as some officials remained apprehensive that permitting farming of any kind, no matter its merits, would in the end spur all manner of farming activities with negative consequences for urban planning and beauty. In any case, cultivation of short crops was not allowed along the river banks, because this would expose soils to erosion and cause siltation and water pollution. Roadside farming in town was also disallowed on account that the crops are exposed to pollution associated with vehicular exhaust fumes, which contaminate the crops causing health problems for humans. *Sukuma wiki* planted on road reserves was singled out as posing a health risk to consumers.

Unlike in built-up areas, farming in peri-urban areas was permissible subject to certain conditions. The prospective peri-urban farmer is required to apply to the municipal council for a permit to cultivate and he/she is supposed to show evidence of ownership of the plot they intend to cultivate. Where the farmer wishes to cultivate a plot belonging to someone else, an agreement with the

²⁴ Chief Public Health Officer, EMC, interviewed on 26 July 2007.

²⁵ Senior Enforcement Officer, interviewed on 31 July 2007.

²⁶ Extension Officer, Pioneer Location, interviewed on 22 August 2007. The extension officer is in charge of a farmers' information desk in Langas settlement, which is located within Pioneer administrative location.

owner is required. In both cases, the plot should not be less than one acre in size and a permit can only be granted if the applicant's neighbours do not object to his/her intention to farm.

Although there was no trace of written by-laws governing urban crop cultivation, such accounts by EMC officers imply that by-laws may have actually existed but were probably dropped at some (yet unknown) point. Our interviews suggested that the beginning of official tolerance of urban agriculture and/or leniency towards offending urban farmers in Eldoret could be traced back to the period of national economic restructuring of the 1980s and 1990s through SAPs that wrecked livelihoods of many urban residents, not only in Eldoret but nationally. The EMC Senior Enforcement Officer alluded to this when he lamented the challenges of enforcing by-laws related to urban agriculture in the town:

Sometimes people who have been arrested by Council officers for doing illegal farming and subsequently arraigned in court have ended up receiving very lenient sentences or fines. We have experienced such problems with people farming in the Council's open spaces within West Indies estate. Many people who farm there are former Council employees, retrenched civil servants, workers rendered redundant by the closure of such factories as Rivatex, and so on. When such people are arrested and taken to court for farming in town illegally, they usually plead for leniency from the magistrate citing their circumstances. Many times the magistrate would pass lenient sentences such as one or two hours of community service. In the circumstances, the council officers see it as a waste of time to arrest such people.²⁷

Clearly, it is doubtful that such punitive measures as slashing of crops would be taken without some form of legal backing. Nor would people be arraigned in court let alone have judgment passed against them without a legal basis. Another officer at EMC noted thus:

The restrictions on maize cultivation used to focus more on farming on railway land. Council officers used to even slash crops. But it appears that by-laws that allowed them to do that no longer exist. I do not see that in the latest by-laws.²⁸

Were it to turn out that the by-laws and guidelines referred to by EMC officers were actually non-existent at the start of the fieldwork for this study, then one could characterize the continued references to and 'enforcement' of restrictions and exceptions as a hangover of long-entrenched anti-urban agriculture traditions, possibly carried over from colonial days and reinforced by the whims and attitudes of individual officers. What is more, the latest set of EMC by-laws (approved by the Minister of Local Government in 2009) contains not a single by-law that touches on crop cultivation, betraying a lack of clear official policy on urban crop cultivation in Eldoret. Given EMC's own rationale for previous restrictions on urban crop cultivation and what is already known in the literature about the activity's potential environmental and public health risks (see Chapter

²⁷ Senior Enforcement Officer, EMC. Interviewed on 31 July 2007.

²⁸ Attached to Committees Office, EMC. Interviewed in May 2010.

2), EMC's decision to omit urban crop cultivation from its legislative framework and in effect leaving it to proceed in an unplanned and unregulated manner is both surprising and injudicious. In any case, and as Table 5.1 indicates, urban farmers themselves shared, to a great extent, most of the environmental and health concerns of unregulated urban farming. The majority among both female and, to a slightly greater extent in most instances, male respondents agreed with some of the reasons on which restrictions on urban farming in Eldoret and elsewhere have been predicated. The only exception was the rejection by both men and women – to more or less the same extent – of the notion that urban farming is not compatible with the urban environment. And although just under one half of both men and women respondents appreciated the livestock-human disease transmission risks, a significant proportion of those who did not were simply unsure about the risk (and did not reject it outright). In this case, as with most other risks, women were overrepresented among the latter group. Thus, compared to men, women seemed to have relatively limited knowledge of the environmental and health risks of unregulated urban farming.

Table 5.1 Urban farmers' perceptions of environmental impact of urban agriculture, by gender (%)

Reason for restricting urban agriculture	Men (N=72)			Women (N=128)		
	Agree	Disagree	Unsure	Agree	Disagree	Unsure
Tall crops like maize pose a security risk	61	26	8	64	27	11
Crop cultivation using polluted water is harmful to health	69	21	10	66	11	23
Some crops provide breeding ground for mosquitoes	58	31	11	53	38	9
Farming along river banks causes siltation	68	13	19	57	15	28
Roadside farming exposes crops to contamination by exhaust fumes	58	24	18	52	16	31
Roaming livestock may cause traffic problems and accidents	90	7	3	84	8	8
Livestock waste makes the town untidy	75	21	4	71	22	7
Livestock destroy gardens and trees retarding beautification of town	76	17	7	73	16	11
Livestock causes disease transmission between animals and humans	49	24	28	47	29	24
UA is not compatible with the urban environment	29	58	14	24	60	16

Politics and the practice of urban agriculture

Notwithstanding legal and official restrictions and repression, urban agriculture is omnipresent across Eldoret's municipal space, both in the peri-urban and built-up areas. As elsewhere in sub-Saharan Africa (see Mlozi 1997; Mbiba 1995; Simatele & Binns 2008; Mudimu 1996), the prevalence of urban agriculture in Eldoret partly relates to urban farmers' conscious defiance of the legal and official restrictions on urban farming. The vast majority of farmers in Eldoret have gone ahead to cultivate crops and rear livestock without first seeking permission from the Council or adhering to stipulated regulations. For instance, only three urban farmers had sought permission to undertake farming in town out of the 133 who were aware that they needed to do so. A higher proportion of male respondents (79%, N=72) than female respondents (59%, N=128) were aware of municipal council regulations.

Because of a lack of enough grazing space as well as a lack of financial capital to afford (adequate) feed supplements from the market, many urban livestock keepers resorted to free range animal grazing/feeding. Roaming animals and birds are a common sight in Eldoret. Cows are usually grazed in open fields and along road reserves. It is common to find sheep, goats and pigs roaming in estates and between buildings and on garbage heaps and dumpsites scavenging for food unattended. Farming along river banks and by the roadside is also common and despite security concerns over maize cultivation related to its height, maize is one of the two most common crops cultivated in Eldoret (see Chapter 6).

Asked whether the legislative and policy framework for urban agriculture had affected their urban agriculture practices, a large majority (84%, N=133) of the respondents who were aware of the regulations (and/or the consequences borne by some offending farmers previously) said they had not. The remaining 16% of the respondents whose urban agriculture activities were affected, responded to the restrictions and EMC's harassment in various ways. They either changed their farming practices to conform to the regulations, scaled down on activities that were subject of repression, or continued with the activities albeit with anxiety and fear.²⁹ The in-depth interviews also revealed that some farmers devised ways around the regulations. Because of the general negative attitude towards roaming pigs epitomized by previous poisoning and shooting of the animals, some poor pig farmers were sometimes forced to confine their animals during the day and to release them only when it was safe to do so. Mhubiri referred to above was one such farmer. Since he could not afford the cost of feeds, Mhubiri re-

²⁹ Eight farmers had resorted to confining their animals within their compounds (with one turning to zero-grazing), four stopped keeping the animals altogether, one reduced the number of animals they kept, and five said they continued with the same activities fearfully.

leased his pigs every morning at around 5.00 am to scavenge for food and returned them around 8.00 am to confine them on his compound for the rest of the day. For his case, however, this strategy did not fully protect him from the authority's wrath as he eventually lost his eight pigs to suspected poisoning by EMC.

Many urban farmers consciously defy by-laws and restrictions related to urban farming or devise ways to circumvent them, because urban agriculture is too important to their livelihoods given their economic circumstances and because "other people are also farming in town", including senior municipal officers and government officials. The two reasons were given, respectively, by 47% and 37% of the 133 respondents who understood that urban farming in built-up areas was outlawed and that prospective farmers in peri-urban areas required clearance from the Council. Women tended to take the risk because of the perceived importance of urban agriculture to them while men mentioned the second reason often than women (see Table 5.2). Other farmers also carried on with farming activities despite EMC restrictions either because of perceived laxity on the part of the municipal authorities in enforcing its restrictions or they just wanted to utilize readily available agricultural space.

Table 5.2 Reasons for continued farming despite knowledge of restrictions

	% male (N=57)	% female (N=76)
Too important to abandon	40	53
Other people are also farming	44	32
Laxity in enforcement of restrictions	9	9
To utilize readily available space	11	7

The Town Clerk and Mayor were identified among senior municipal council officers and civic leaders who were themselves cultivating crops and keeping livestock in the town. Senior government officials included the District Commissioner and Officer Commanding Police Division. The upshot of this is that the municipal council lacked the moral authority and the muscle to enforce its own by-laws. As Mlozi (2003) has noted in a different East-African context, "[T]he fact that there are many senior government and ruling party officials among the livestock keepers who break the by-laws with impunity, is probably the best assurance for most other livestock keepers that they will not be punished for breaking the law." Indeed, in some cases, as in Mwanza (Flynn 2001), the participation of powerful individuals in urban agriculture could provide the necessary leverage for promoting urban agriculture and thrusting it up the policy agenda.

Photo 5.1 Roaming sheep sheltering within Llangas market centre



Photo 5.2 Livestock grazing in open spaces within Llangas



Urban farmers' disobedience of EMC and the latter's ambivalence in enforcing by-laws are augmented by the agricultural history of the town and a farming culture of its population. In addition to its recognition of the value of urban agriculture to peri-urban landowners, the municipal council also tolerates farming because it appreciates the challenges involved in changing land tenure regimes and converting farmlands into urban land-use, more so where this implies a cultural re-orientation. In peri-urban areas in particular, not only has farming historically predominated and constituted an integral way of life for residents there, but most of those areas have only recently been incorporated into the municipality following outward expansion of municipal boundaries (see Chapter 3). One government officer put it this way:

Some farms found within Eldoret Municipality are ancestral land which found themselves included in the municipality as the municipality boundaries expanded. It therefore takes time for their owners to adjust to the fact that they are now located within the municipality and are therefore subjected to municipal by-laws. It is difficult to convince owners of such plots that they should not grow crops or keep animals on their plots if they have been doing it all their life.³⁰

Moreover, Eldoret municipality is an area of multiple cultures defined mostly in terms of the population's ethnic diversity. Although the Kalenjin ethnic community is considered autochthonous to Eldoret and dominates municipal politics, the town has over the years acquired a multi-ethnic character. Not only do the different ethnic communities have varied preferences and needs in urban agriculture, they also perceive themselves as occupying different positions in the political power game. These facts have in the past fuelled ethnic tension even in the context of urban farming. For instance, the keeping of cattle is considered a way of life among the Kalenjin community. As such its practice by Kalenjins in town is tolerated, if not outright justified and supported by Kalenjin officials and civic leaders who dominate the council. Thus enforcement of by-laws relating to cattle keeping in town and especially in areas represented by Kalenjins is reportedly more lax.³¹ In contrast, pig farming, which is dominated by Kikuyus, is distasteful and vehemently opposed by the municipal authorities, which, as has been indicated above, has in the past organized to decimate them.

Members of the Kikuyu community – as is Mhubiri already referred to above – put premium on pig keeping as an important economic enterprise and therefore viewed the harassment of pig farmers and indeed of other livestock keepers in areas dominated by non-Kalenjins as political injustice bordering on economic sabotage. As such, some Kikuyu politicians not only protest to the authorities, they also connive with residents in affected areas to frustrate the enforcement of by-laws. A Kikuyu councillor noted thus:

³⁰ District Animal Production Officer, Uasin Gishu District. Interviewed on 28 August 2007.

³¹ Councillor, Kapsuswa/Kidiwa ward, interviewed on 15 August 2007.

In my ward Council *askaris*³² are always arresting farmers and confiscating animals found grazing in open fields and along the road reserves (...) But the Council *askaris* never arrest grazers and confiscate animals in areas like Kimumu and Racecourse. When I raised this issue one day in a Council meeting, I was told openly that keeping animals is part of Kalenjin culture and as such they should be left to continue keeping animals in town. Why should they favour certain communities only? I think we should forget all about enforcing this law since it is only my people who are being harassed because they are non-Kalenjins (...) Because of this favouritism, I also try to help pig farmers in my ward. There are many pigs in my ward and the owners are my supporters (...) Whenever the Council hatches a plan to impound or kill roaming pigs, I leak the information to the pig keepers. I tell them to confine their pigs.³³

Such actions by councillors show how politicisation of urban farming plays out in the policy and legislative arena to frustrate the enforcement of existing by-laws and the evolution of a better regulatory framework for urban agriculture. Indeed, political interference by councillors was identified as the major obstacle faced by the municipal council in enforcing by-laws.³⁴ The more so during election years when political pressure is brought to bear on enforcement officers to relax the rules as councillors fear to antagonize those who farm in town for fear of losing out on their votes. Thus, whenever the enforcement officers impound roaming animals, the owners seek (and often secure) the intervention of councillors, in most instances following the animals to be released without any fine. Sometimes the councillors go as far as giving ultimatums in council meetings to enforcement officers demanding that they desist from harassing urban residents. Similar dynamics have also been reported in Harare (Mbiba 1995).

The politics of urban agriculture has also been defined by unequal power relations and competing (sometimes contradicting) interests between EMC and other actors operating within the municipality. For instance, some actors are involved in promotional activities for urban agriculture in contravention of EMC official position. An officer at the municipal council was categorical that "(I)f there are any organizations offering agricultural extension services for farmers within the built-up area, then such organizations are violating the existing by-laws."³⁵ Yet, this is exactly what the government's Ministry of Agriculture and Livestock Development was (and is) doing.

The ministry operated an elaborate extension services programme in Uasin Gishu district, including Edoret town, the district's headquarters.³⁶ It had established information desks in various areas of the municipality where farmers could access agricultural extension services on scheduled days (at least twice every

³² Security officers.

³³ Councilor, Kapsuswa/Kidiwa ward, interviewed on 15 August 2007.

³⁴ Senior Enforcement Officer, EMC, interviewed on 31 July 2007.

³⁵ Director of Environment, EMC, interviewed on 4 July 2007.

³⁶ Agribusiness Development Officer, Ministry of Agriculture and Livestock Development, Uasin Gishu District. Interviewed on 3 July 2007.

month). One such information desk was located within Langas settlement and another at the Kapsaret Divisional Office within the town's CBD. The ministry's extension officers provided technical advice and information to farmers – and occasionally provide them with inputs free of charge for demonstration – without distinguishing between urban and rural farmers. One officer clarified that her department offered assistance to “whoever engages in any kind of farming” in the district including those in the municipality regardless of the location of their farming activities.³⁷ In justifying why they offer services to urban livestock keepers, another officer noted thus: “whenever urban farmers seek our services when their animals are sick, we respond promptly because the health of the animal is paramount.”³⁸ She also pointed out that the veterinary department was involved in the training of pig farmers on a broad range of issues covering the entire chain of production (rearing, feeding and marketing).

Whereas such activities clearly undermine the municipal council's resolve on controlling urban agriculture, it nonetheless seems helpless in dealing with such state actors whose legal mandate and jurisdiction seem to supersede its own. Moreover, the council has time and again had to rely on some of these state actors such as the veterinary department to implement some of its own by-laws.

³⁷ Divisional Crops Officer, Kapsaret Division. Interviewed on 14 August 2007.

³⁸ District Beekeeping/Marketing Officer, Uasin Gishu District. 23 July 2007.

Livelihood diversification by farming households

As has come to be expected of the poor in diverse contexts (see Chapter 1), diversification of livelihood sources was an important strategy adopted by urban farming households in Eldoret to cope with changing economic circumstances, and labour, but also (in this particular case) land, were critical assets in the organisation of the diversified portfolio of activities. Livelihood diversification was particularly important in the town given the diverse, seasonal and low-paying nature of the limited income-earning opportunities in the market. This Chapter highlights the various farming and non-farming activities pursued by the households as well as their inter-linkages within the overall household livelihood systems.

Farming activities

Farming in Eldoret municipality has been going on for as long as urban residents have had access to land. In any case, much of the municipal space comprises areas that were formerly rural and in which agriculture has historically predominated. Such areas came under the jurisdiction of the municipal council following outward municipal boundary extensions (see Chapter 3). While part of the land in such areas has converted to commercial land uses over the years, many landowning households that previously farmed – as well as migrants in those areas – have continued to do so both because of financial constraints to invest in commercial land development and because farming is a way of life.

However, consistent with trends elsewhere in sub-Saharan African cities, urban agriculture in Eldoret seemed to have especially grown in importance and surged since the decades of macro-economic restructuring (i.e. 1980s and 1990s). Thus, two of the 160 farming households surveyed reported more than 40 years

of urban farming, 4% had been farming since the 1970s, 16% since the 1980s, while 40% started farming in the 1990s and 37% since 2000. While the trend in Langas may be attributed to the fact that some landowners may be recent migrants into the town, a consideration of the length of plot ownership on the one hand, and the history of crop cultivation on the other, leads to a similar conclusion. Farmers who had acquired their plots during and after the decade of 1980s showed more urgency to cultivate their plots compared to those who acquired plots before then. The former took an average of 3.6 years before cultivating their plots compared to 11.2 years for the latter. In-depth interviews with urban farming households left no doubt that many of them had resorted to urban agriculture out of necessity and as a fall-back strategy after their main income sources dwindled. The following two examples will suffice:

After Chebet¹ was transferred to a new work station in Eldoret, her husband bought land in Langas in 1974 primarily because she wanted to operate from her own home in town. Although she started doing *some* farming – mainly maize cultivation – on the plot the following year rather than leave it idle, it was not until 1988 that she embarked on what she described as *serious* farming. In that year, Chebet left her job in the Ministry of Health as the government embarked on downsizing its workforce. As she put it: “There was no future in the employment so I opted for early retirement and took a ‘golden handshake’² instead and moved in to start *serious* farming.” She changed from maize to vegetable and dairy farming. The latter became her main source of income.

Obachi,³ another urban farmer, was employed by Rift Valley Textiles Company (Rivatex) in 1985. After saving some money with the company’s co-operative society, he took a loan from the co-operative with which he bought a plot in Langas in 1990. He lost his job in 1997 when the company faced financial hardships which forced it to eventually close down. With the savings he had made over the years, Obachi cleared the balance on his loan, built a house on the plot and moved in. In 1999, he got a job with another textile company, Mountex, in Nanyuki town. Like at Rivatex, and because of his experience there, Obachi was employed in Mountex’s weaving department. However, two years later when the company substituted cotton with semi-processed textiles in a bid to remain competitive, Obachi and his colleagues in the weaving department were rendered redundant and laid off. Upon losing his second job, he moved back to Langas and embarked on urban farming. He started by keeping pigs, some of which he later sold to buy a cow.

A review of the policy and legal framework for urban farming in Eldoret (see Chapter 5) provided further evidence that the deteriorating economic circumstances contributed towards the surge in urban agriculture in at least two other important and interrelated ways: they yielded official tolerance for the practice and, as a result of this, led to laxity in the enforcement of relevant anti-urban agriculture by-laws.

Urban farmers in the municipality engaged in a variety of farming activities. Of the 160 households surveyed, 86% cultivated crops and 73% kept livestock.

¹ Interviewed on 23 May 2009.

² This was the popular term used at the time to refer to the financial benefits that were extended as a send-off package to civil servants who opted for early retirement.

³ Interviewed on 6 June 2009.

Sixty per cent engaged in both crop cultivation and livestock-keeping, while 28% cultivated crops only and 13% kept livestock only. Table 6.1 shows that female-headed households were more likely to keep livestock only than male-headed households. Because women were more disadvantaged in terms of property ownership and access to financial capital, they seemed to consider livestock keeping as offering an important alternative asset-building opportunity. Not to mention that livestock constituted important liquid assets that could easily be converted into cash income to meet immediate household needs. Moreover, compared to married women who were more restricted in terms of ownership and sale of livestock, female household heads enjoyed greater freedoms in these respects, and were therefore more motivated to keep livestock.

Table 6.1 Farming activity, by gender of household head (%)

Farming activity	Male (N=127)	Female (N=33)
Crops	91	76
Livestock	71	79
Crops and livestock	61	55
Crops only	29	21
Livestock only	9	24

Crop cultivators grew a variety of crops. By far the most common of these were *sukuma wiki*⁴ – a green leafy vegetable of the kale variety – and maize, which were each grown by two-thirds of all the 160 households. Maize is a staple crop used in making Kenya’s popular *ugali* dish (maize meal or tough porridge), while *sukuma wiki* is its regular accompaniment. Other crops cultivated by at least 10% of the households included spinach, bananas, *suja* (black night shade), sugarcane, cowpeas, *nduma* (arrow roots) and onions. Appendix 6.1 summarizes the variety of crops grown by the study population and their relative occurrence among households. It is noteworthy that apart from bananas and sugarcane, all the other crops are essential food crops. The number of crops grown per plot ranged from one to nine, with a mean of 3.5. The level of crop diversification on household plots did not vary with gender i.e. female-headed households cultivated as many types of crops as did male-headed – a mean of 3.4 and 3.5, crops, respectively.

⁴ *Sukuma wiki*, a local Kiswahili name, translates literally ‘push the week’, in reference to the vegetable’s importance in the diets of low-income households due to its high yield and low price.

At least nine different types of livestock were raised in the study area. Chickens and sheep were the commonest livestock, kept in both cases by one in every three households. Others, in order of prevalence, included cows (20%), ducks (17%) and pigs (12%). Goats, pigeons, turkeys and geese were also kept, but to a much lesser extent. Between them, the households under study kept a total of 572 chickens, 265 sheep, 261 ducks, 116 cows and 109 pigs. Thirty goats, 71 pigeons, 13 turkeys and 11 geese were also kept by the respondents. On average, livestock farmers kept 12.4 animals of 1.7 different varieties. The broadest variety was 4 types of animals. The importance of urban crop cultivation and livestock keeping to the livelihoods of farming households and to the well-being of men and women within those households is the focuss of Chapter 8.

Non-farming livelihood activities (NFAs)

Besides farming, the households engaged in multiple other livelihood activities. At the time of the survey, only 14 (or 9%) of the 160 households did not engage in any non-farming livelihood activity (NFA). The 146 (or 91%) that did shared 230 opportunities between them. Overall, a total of 195 household members were involved in NFAs; of these 113 were men and 82 were women. Table 6.2 shows how these income sources were distributed among household members and gender categories. It can be noted that only 18 (or 9%) of the household members involved in NFAs were household members other than heads of households and spouses (in the case of male-headed households), and all of them were men. This reflects the fact that there were fewer out-of-school adults in the households and that, compared to male children, female children tend to marry and move out of their parents' households early. Moreover, school-going children were not a major source of labour for income-earning activities for many households, mainly because of their preoccupation with studies, which many parents seemed to lay greater emphasis on. Where school-going children were involved in livelihood activities, they did so mostly on weekends while out of school.

Yet even when adult members of the household other than the spouses engaged in income-generating activities, they did not seem to be necessarily obligated, nor was it mandatory for them, to contribute towards the household budget:

I also have two sons who work. One is a teacher in a private primary school while the other works in a wholesale shop in town. Occasionally, when they have money they contribute to the household budget but I do not want to insist on that because I know they also have their own needs to cater for. Sometimes they also give me money out of own volition.

(Njeri, 19 May 2009)

My nephews always leave the house very early saying they are going to look for work to do but they cannot buy anything in the house; not even sugar.

(Mam Sella, 30 May 2009)

When I earn my money (as a teacher), I normally do not discuss with my mother how much I earn or what to do with it. However, I always contribute towards the household budget.

(Kimani, a widow's son, 2 June 2009)

In other words, households did not necessarily function as unitary economic actors owing to (sometimes) incongruent preferences, interests and perceived obligations of different household members. Complementarity of roles and effort in constructing household livelihoods and income-pooling was more evident between spouses. The complementarity manifested in the diversity of the activities themselves, the trade-offs between them and the gender roles they fulfilled.

Table 6.2 Distribution of NFAs, by gender at individual and household levels

	N	No. participating	% of total	No. of NFAs	Average no. of NFAs
<i>Individual level*</i>					
Male household head	127	95	75	118	0.93
Female spouse	119	52	44	54	0.45
Female household head	33	30	82	40	1.21
Other male member	-	18	-	18	1.00
Other female member	-	-	-	-	-
Total		195		230	
<i>Household level**</i>					
Male-headed household	127	116	91	185	1.45
Female-headed household	33	30	91	45	1.36
Total	160	146	91	230	1.44

* Chi-square: $X^2=37.804$; $df=2$; $p=0.00<0.05$; ANOVA: $p=0.00<0.001$. 'Other male member' category was excluded from the analysis.

** ANOVA: $F=0.261$; $p=0.610>0.001$.

The NFAs were spread across various sub-sectors, the majority of which were in the informal sector (see Appendix 6.2). Only 17 (or 9%) out of the 195 working members were regular salaried employees in the formal sector. The rest eked a livelihood in the informal sector as self-employed entrepreneurs or wage earners. Most of the income-generating activities were in petty trade involving groceries and essential household items (e.g. charcoal, firewood, paraffin and food items) (16%, $N=230$), hawking of a wide range of merchandise (15%), and casual labour in construction and agriculture (13%). Other important sources of livelihood included small manufacturing and construction-related artisanal works such as masonry, metal fabrication and welding, and carpentry (10%), retail ki-

osks (5%), transport services (4%), and other services such as beauty and hair-dressing, and community work (3%). Rent from housing was a particularly important source of regular income for some households (26%).

It can be construed from Table 6.2 that the level of participation in the job market varied significantly with gender, being highest among female household heads, both in terms of their proportional representation as well as the number of NFAs they took up. This was particularly the case in comparison with married women, and could be attributed to the absence of other household members to complement the incomes of female household heads who mostly acted as the sole bread winners for their households. In the final analysis, the difference in the means of NFAs between male- and female-headed households was not statistically significant.

Cultural norms, gender roles, and differential capabilities and economic status between men and women helped to delineate boundaries defining the type and location of activities for men and women. Women mostly engaged in what have traditionally been regarded as women activities. They mostly traded in groceries including fruits and vegetables, other food items such as maize flour, sugar, salt, and cooking fat, etc. as well as essential household commodities like paraffin and charcoal (Appendix 6.2). These activities generally required little start-up capital, sometimes involved own produce from urban agriculture, were usually carried out on a small scale, and primarily for household use. The scale of women's livelihood activities could be attributed to the fact that, on average, they lacked large amounts of capital to invest in big projects. It has also been known that in times of adversity, and given their child-caring responsibilities, unlike men, women are usually prepared to swallow their pride and do whatever is necessary to feed their families. The following is a case in point:

When Baba Daddy⁵ built a house on his plot in Langas and moved in with his family upon losing his job with an insurance company, his wife, Mama Daddy, proposed to him the idea of planting vegetables on the plot and starting a small kiosk in front of the house. Baba Daddy was strongly opposed to the idea, preferring instead to use the plot as a car parking lot. However, one time when Baba Daddy was out of town his wife went ahead to till the plot and to start selling items in a makeshift structure she erected in front of their house. On his return home he was 'very disappointed' to find that this had happened. He picked a quarrel with his wife but eventually gave in and it was not long before he came to realize how 'wise' his wife was – without a job, his economic circumstances continued to deteriorate until he had to eventually sell his car. He explained his opposition then as follows: "Initially, I was not so keen with her kind of business. I did not want to let myself down and to look like a failure. Many of my friends had cars and they used to visit me. In those days, I didn't understand why someone would want them to park on the roadside and not in my compound because of vegetables and unsightly structures. I used to think about big business. I was also thinking about putting up a storey building on my plot and not kiosks, but after losing my job I lost that focus."

⁵ Interviewed on 7 June 2009.

Women's livelihood activities further highlight the interconnectedness between gender roles, choice of occupation and household food security and well-being (see Floro & Swain 2010). Besides being practical in light of the limited capital available to them, the choice of food-related activities by women was also strategic in the sense that when the household did not have money for food, it could divert the stock for household use and replenish it when money was available. For instance, Gitau's wife, Ann, used to sell Irish potatoes, maize, vegetables, tomatoes and onions until 2007 after being involved in a road accident as she traveled to the market to source for the commodities. On the importance of his wife's business then, Gitau⁶ commented thus: "we never used to have money problems because she could provide when I came home empty-handed. Even if we had no money completely, we could not sleep hungry because she could cook part of her stock." In this way, and as has been noted by Floro & Swain (2010: 4), the "non-pecuniary benefit provided by the unsold inventories, which can be directly used to meet food needs (...) can more than compensate the foregone additional earnings that may be gained by choosing another occupation". However, as Wanjiru's and Amanda's cases below indicate, this strategy does not necessarily assure food security in the longer term in other important ways. On the contrary, in the absence of other income sources, depletion of stock may expose the household to greater vulnerability:

I used to sell vegetables and Irish potatoes but it reached a time when I stopped because I ran out of stock. Whenever I did not have customers to buy the produce, we would consume it ourselves (...) that is why when I later got some little money I decided to start selling maize, beans and firewood. The advantage with these commodities is that they don't go bad easily. If there are no customers, you can still keep the stock and sell another day.

(Wanjiru, 26 May 2009)

I used to operate a small business of selling charcoal, Irish potatoes, beans, maize and vegetables by the roadside. It was our main source of daily bread. I used to come home with between Ksh. 400 and Ksh. 500 per day. During mid-month when most people are always broke I used to get about half of that and I had no problem getting food for the family. Since I used to buy items in bulk, we would use some of them in our household and still maintain my stock. However, when violence broke out after elections, I was not able to continue with the business. We ended up using all the items ourselves until the stock ran out. I have not managed to find money to restart the business. Life is now very difficult for us.

(Amanda, 26 July 2009)

Moreover, because they were expected to 'stay home' and perform domestic duties, women's livelihood activities were highly localized – mostly within their neighbourhoods closer to their homes (see also Owuor & Foeken 2006). This was particularly expected of women who had young children to take care of. As the case of Njeri indicated, women sometimes had to sacrifice their income-earning activities for the sake of child care. Njeri used to sell herbal medicine, which was

⁶ Interviewed on 22 August 2009.

her main source of income besides urban farming. Her business involved hawking the herbal products around the estate and beyond, which she could no longer do after giving birth. As a result, she relied more on urban farming and her husband's occasional remittances for survival.

In contrast, men enjoyed greater latitude as to where they could look for income opportunities and were not bogged down by domestic responsibilities. Their obligations – paying school fees, medical expenses, and other lumpsum expenditures like housing or land purchase – also required that they look for higher paying jobs wherever. As such, a higher proportion of men compared to women worked outside the neighbourhood without restrictions from their spouses. A few men worked in other towns and were not regular residents in Langas, although they remained the heads and the main breadwinners of their households. Besides, more men than women possessed some skills in apprenticeship and as such they participated in the small manufacturing and services sector to a greater extent than women (see Appendix 6.2). Yet even opportunities for unskilled labour that were regularly available in town such as menial labour in building and construction were too arduous and risky for women and were generally seen as men's work.

In theory, men's unrestricted spatial mobility, dominance of the public space, flexibility in time use, and skills endowments placed them in a more advantageous position in terms of appropriating opportunities and resources available in the marketplace. In reality, however, desired income-earning opportunities were difficult to come by and far between, and many men remained redundant over long periods of time. Even those with specialized skills and training of some kind did not fare any better as the demand for their services was mostly erratic and returns were often low. As a consequence, many men started showing greater interest in urban farming. The circumstances of Makai, Gitau and Mhubiri are testimony to this.

A trained mason, Makai specialized in construction of brick tanks and renovation works. However, for four months preceding the interview, Makai had not secured any job contract. As a result, he had to diversify his income sources. Sometimes he travelled outside the municipality to procure vegetables (*sukuma wiki*) in bulk which he then sold in the town on wholesale terms. But this happened only seasonally and when he could afford. As his wife revealed, there were times when both she and Makai were forced to "look for menial jobs, especially weeding people's farms on the outskirts of Eldoret town in order to secure a meal for the family." Because of this, Makai placed high premium on urban farming.

On his part, Gitau specialized in welding and fabrication works. However, most of the time he was idle for lack of customers. In a 'good month', Gitau could fabricate two windows and one door and as he lamented: "Windows do not pay well but doors are better because one door can earn me between Kshs. 2,000 and Kshs. 2,800. But you can't easily get such jobs, so you do whatever you can get." Much like Makai, Gitau increasingly turned to urban farming to provide for his family.

The circumstances of Mhubiri, a carpenter and mason, were not any different. Mhubiri's main income-generating activity involved making furniture for schools and churches. Besides, he ran a carpentry workshop which came in handy when the contracts were not forthcoming, although income from the workshop was irregular and low. For him, the main purpose of the workshop was to keep his *fundis* (i.e. carpenters who work for him) busy so that whenever he got a contract in a school or a church they would be readily available for the job. He would sometimes sell sheep and chickens in order to pay for a trade license for his carpentry shop whenever he had no money and the licence fee was due. And whenever he got lucky and made good sales from the workshop or his contracts, he would restock. When Mhubiri was out looking for contracts, his wife stood in for him at the workshop. However, he never gave her any money from workshop sales. By the time of the interview, Mhubiri had not secured any contract in several months. According to his wife,⁷ Mhubiri had resorted to hanging around the workshop and the home most of the time and although he previously used to concern himself mostly with his pigs and sheep, he had started showing more interest in crop cultivation than he used to when money was flowing in more regularly. He had started helping out once in a while with some farm work and was getting more involved with decisions about farming activities on the plot. Moreover, because furniture did not sell well, he always pressed his wife to give him money whenever he saw her selling items from her business and vegetables in the garden. Often she declined, preferring to spend the money on essential household requirements, to which Mhubiri usually reacted angrily and harshly.

Makai's, Gitau's and Mhubiri's circumstances give credence to the claim that while vocational training may ease individuals' entry into relevant sectors in the informal economy, it does not necessarily raise productivity because of the saturation of the sector (Kabeer n.d.). Mhubiri's case also shows how men sometimes respond to redundancy with anger and frustration, which may strain intra-household relations or even lead to gender-based violence (Narayan *et al.* 1999). In Mhubiri's own admission, it helped that he was a Christian pastor who had tried to minimize misunderstanding in the house by taking his family the Christian way. As he noted: "Religion brings wisdom so that you try to understand each other rather than fighting. (...) If for some reason she does not agree with you, you give her space." Mhubiri's story also demonstrates how, owing to persistent and growing economic hardships and shrinking opportunities in the public arena, men were increasingly retreating into the domestic space as an alternative site of making a living. However, unlike women's entry into the public space that comes up against male-imposed rules of exclusion augmented by cultural construction of appropriate female behaviour, men's retreat into the domestic realm is more or less a *laissez-faire* affair. This is because men own physical domestic spaces while women often rely on the men to not only attain entitlement over the spaces but also to transform them into livelihood sources. Moreover, while women's participation in economic activities outside the home does not necessarily result into men's loss of control over women's economic activities, men's involvement with home-based livelihood activities was usually accompanied by

⁷ Mama Sella, interviewed on 30 May 2009.

women's (relative) loss of space for economic manoeuvre, and of control over their economic activities.

As was noted in Chapter 4, men's increasing inability to effectively provide for their families had forced many women to move in the vanguard of providing for their households. Many men did not seem to mind this development to the extent that the women helped them to fulfill their responsibility of supporting their families. In some instances, men themselves started off their wives, while those who had initially resisted or been apprehensive about their wives' involvement in income-generating activities eventually supported their wives' initiatives and even took greater interest in the activities. Some men even found time to assist their wives in their activities, while others took up some domestic chores in order to free their wives so they could attend to their income-earning opportunities outside of the home.

In this respect, women's participation in the marketplace is not only incompatible with social expectations of their role as mothers, wives and home-keepers, but also transforms gender division of roles, work and space. This conclusion finds resonance with Sonkoro's situation.

Except once in a week when Sonkoro's wife could take a break from her business, she left the house very early every morning to travel long distances to cereals markets away from Eldoret and returned late in the evenings. As a result, she rarely performed household chores such as cooking and laundry, let alone urban agriculture tasks; she left the work to her children, husband and a female relative. However, rather than complain about his wife's failure to meet her social responsibilities in the household, Sonkoro seemed to excuse his wife as demonstrated by the following remarks:

"My wife does not cook or even wash clothes. She always returns home very tired. Her work is tiresome. She wakes up at 6.00 am and returns at 6.00 pm, sometimes even later than this, every day except on Saturdays when she takes a break to go to church. When the children are away in school, the girl who works for her at the kiosk assists her with household chores. I am always around the homestead most of the time and because the plot is small, I do all the farm work by myself. (...) I don't mind because her business generates most of the household income. Besides, we usually sit down with her to decide on what to do with the money she makes from her business."

(Sonkoro, 22 May 2009)

Besides the pragmatic aspect of doing whatever was possible to sustain household livelihoods, including letting women engage in business away from home while men themselves stayed at home and even performed 'female duties', this changed behaviour of men may also be attributed to the modified social milieu that is the urban context. Being migrants in a multi-cultural town and removed from their rural cultural settings, urban residents are under less pressure to conform to cultural definitions of masculinity and femininity, not the least because they are out of sight of the custodians of culture and close relations. In addition, those in town with whom they have cultural and other social ties are bound, for similar reasons, to be also undergoing a similar transformation thereby removing

any stigma that would be associated with performing ‘untraditional roles’. Sonkoro underscored this point when he cited his own – as well as many other men’s – circumstances as the reason many men no longer restricted their wives’ involvement in business, noting thus:

Many communities used to frown at women engaging in business, associating the activity with prostitution. This is no longer the case. Many of us now allow our women to venture into business so long as it can bring food in the house. (...) In town women also mix with people from different cultural backgrounds who do some things differently. They end up learning from other communities. So it is difficult to restrict them, when you are not able to provide for the family and yet they see fellow women doing business and feeding their families.

(Sonkoro, 22 May 2009)

However, some men seemed unsettled about their women’s involvement in income-generating activities, particularly those undertaken outside the home and that held prospects for propelling women to greater economic independence. The underlying fear for such men was that they would lose authority and decision-making power in the household as a consequence of their wives’ enhanced economic status. Nonetheless, the men were in most cases resigned to the reality because of the importance of such income-generating activities to household livelihoods, while at the same time working harder to regain their status as the main breadwinners and decision-makers. Such masculine anxieties and the responses they elicited from men had implications for intra-household gender relations in the long-term; the relations would most probably improve if the economic circumstances of the men improved vis-à-vis their wives’, but perhaps deteriorate if the reverse happened or the status quo protracted.

When Baba Daddy⁸ lost his job in 1997, he and his family were staying in a rental house in Eldoret town, although he had bought his Lngas plot earlier. They couldn’t relocate to their rural home “because that would have demoralised the children”. Instead, he decided to build a house on his Lngas plot and moved in with his family. Initially his wife, Mama Daddy, planted maize on the plot but she later on switched to vegetables which she considered to be more profitable. She cultivated *sukuma wiki* and spinach which earned her at least Kshs. 100 every day. She used part of the money for the household budget and saved the rest with women groups.

With the savings she made through women groups, she was able to start a *mitumba* (second-hand clothes) business. The business was ‘very profitable’. Unfortunately during the post-election violence, all her stock of clothes was stolen and the boutique burnt down. After losing her business, she concentrated on urban agriculture and started selling vegetables, fruits, onions and tomatoes in a kiosk on their compound. She used part of the income to contribute to her social groups. She was a member of three groups – Itiro, Sisido and Banyore. From her several payouts from the groups and with the help of her husband, Mama Daddy was able to put up a shop on the plot, which was an extension of their house. The shop was the main source of income for the household.

Through one of the groups (Sisido), Mama Daddy had also received credit from a micro-finance institution. She used the first loan of Kshs. 50,000 to expand her stock in the shop

⁸ Interviewed on 7 June 2009.

and the second loan of Kshs. 90,000 to buy a motorcycle for a transport business. The transport business earned her Kshs. 400 every day, part of which she used in repaying the loan. In the meantime, she was also planning to restart the *mitumba* business, and had two sewing machines with which she also planned to start a tailoring business.

From the face of it, Mama Daddy's household had benefited a great deal from her involvement with social networks with the initial facilitation of income from urban agriculture, which had enabled her and her household to withstand the general economic hardships and the shocks that were associated with the post-election violence. The story of intra-household relations was a bit different though. Her husband, Baba Daddy, worked for an insurance company, a job he had got only recently. The company paid him on the basis of commission and his income had not stabilised. He also owned shares in two companies but the dividends were not good. And although he saved with his employer's co-operative society, his shares had not grown big enough to earn him a reasonable loan.

While he appreciated and had been very supportive of his wife's progress, Baba Daddy was at the same time increasingly getting unnerved by the progress, which appeared to threaten his masculinity. Noted he:

"(...) my wife belongs to several women's groups. I support her in that. The groups have really boosted her business and she is now doing very well financially. It is also forcing me to work harder so that she does not beat me financially, otherwise she will become too powerful in the house. I won't have a voice in the house if she has more money than me. I am planning to buy a motorbike soon and give it to my son without her knowledge. I expect the motorbike to generate Kshs. 500 per day. I also recently bought two pigs, which I kept at my friend's place. In another one year they will have multiplied and I should be able to generate considerable income from them. My wife is not aware of my plans. I just want to surprise her one day then she will realize that I am the man of the house."

Among married women in Langas who participated in the present study, Kikuyu, but also Kisii women were more involved in the marketplace and enjoyed greater mobility than women from other ethnic communities. This reflects a general trend in the country. Older women and unmarried women were also found to enjoy greater autonomy in market-based activities compared, respectively, to younger and married women. For instance in contrast with the high level of autonomy enjoyed by Sonkoro's wife (referred to earlier), the participation of Onyancha's wife, Moraa, in the marketplace was more restricted.

With her husband's support, Moraa (27 years old) operated a kiosk by the roadside in Langas estate, not far away from their home. The kiosk was the most important source of livelihood for the household. Moraa specialized in groceries. She got part of her stock – e.g. *sukuma wiki*, cowpeas, onions, *suja* and pumpkins – from their plot; but most of the produce came from the market in the town. Occasionally, Onyancha would accompany his wife to the market in Eldoret town to buy the produce. At some point, the prices of commodities went up so much so that they could hardly survive in the business unless they looked for a cheaper source of produce elsewhere. Rather than let the wife do it, Onyancha himself started traveling to their rural town of Kisii twice a week to bring produce like sugarcane, avocados, pineapples and bananas for his wife to sell in the kiosk.

Sonkoro's wife and Moraa are both from the Kisii community. Beyond this, they have stark differences between them. Moraa was younger (27 years), had a little child, and her husband was an active participant in the job market who had contributed to her business start-up. On the other hand, Sonkoro's wife was older

(51 years) and her youngest children (twins) were fourth form students in a boarding secondary school. In addition, she had a female relative who stayed with her. Sonkoro's wife was also the main breadwinner since her husband was out of work. This comparison illustrates how intersections of age, socio-economic standing, household compositions, and bargaining power presented differential opportunities for women in the same locality.

Trade-offs between urban agriculture and non-farming activities

The contribution of urban farming vis-à-vis non-farming activities to household livelihoods varied between households and over time; so was the nature of trade-offs between them. It has already been stated that many households had initially resorted to urban agriculture as a means of coping with difficult economic circumstances once their main income sources dwindled. Initial investment in urban farming invariably came from non-farming activities. For some households, urban agriculture soon became an important source of livelihood requiring full-time commitment. For others it remained a supplemental and survival strategy undertaken on part-time basis or as an important means of safeguarding incomes from other livelihood strategies to be channelled towards other developments. In such cases, income earned from urban farming was dedicated to household consumption and was rarely re-invested in other livelihood ventures. For other farmers, urban agriculture provided an important basis for other income sources and, especially in the case of women, for social capital formation that was critical for their participation in non-farming livelihood activities. As shall be demonstrated more elaborately in Chapter 8, like Mama Daddy (referred to earlier), many women used earnings from urban agriculture – especially from the sale of vegetables – to meet their financial obligations to their social networks and in turn accessed financial resources from and through their groups which they invested in other livelihood ventures. Male farmers too reported back-and-forth trade-offs between urban agriculture and their other income activities. It has already been mentioned, for instance, how Mhubiri had to sell sheep and chickens in order to pay for a trade license for his carpentry shop whenever he had no money and the licence fee was due, and how he would use income from the workshop and carpentry contracts to restock.

Trade-offs between farming and non-farming livelihood activities can also be seen in terms of labour allocation. How male and female labour was allocated between the two types of activities largely depended on their (perceived) relative contribution to household livelihood, the type and nature of urban agriculture and the location of the activities, and seasonal trends. In the typical case where urban agriculture was a supplemental livelihood activity undertaken on-plot or in the

backyard, women dominated and labour requirements for other livelihood activities were not significantly affected. This was especially the case where crops were involved, and the animals kept could fend for themselves (e.g. sheep and small livestock like ducks and chickens). In such cases, the allocation of labour between urban farming and other activities was more flexible; it was rare for households to withdraw labour from or withhold it for other income sources in favour of urban farming. The common practice was for household members to attend to their plots before proceeding to and/or after returning from other activities, and/or during the days they were not undertaking the other activities such as on weekends. In the case of women who participated in petty trade within their neighbourhoods, they simply juggled between farming and their other income-earning activities. Alternatively, outside labour would be hired to perform urban agriculture activities. In cases where none of these options was tenable, it was more likely that urban agriculture would suffer from the patterns of labour allocation, as exemplified by Makori's dilemma below.

Makori and his wife Jane kept chickens (their main farming activity in the town) and also operated a food kiosk located a few metres away from their residence in Langas. The kiosk was their household's main source of income. Jane took responsibility for the chickens and spent most of her time at home taking care of them, while Makori was in charge of the kiosk. Occasionally Jane would help out with work at the kiosk. Similarly, Makori assisted with some chicken-related tasks, and particularly cared for the chicks at the food kiosk where it was easier to warm and feed them. Jane had also recently taken up a 'profitable' second-hand clothes business which involved regular travel out of town. She travelled to her rural town of Kisii every Friday and Sunday, as a result of which she no longer took good care of the chickens, resulting into low productivity. Whereas she previously collected at least a tray of eggs (or 30 eggs) every day, she had started collecting very few and sometimes none at all. Makori shared his wife's sentiments, noting that although he took responsibility for the chickens when his wife was not around, he was not able to give them full attention as his wife would do. He could only afford to go back home and check on them just once every day because he had to make sure that everything went well at the kiosk, stating that in his absence the workers could not attend to their duties well. Although he valued his chicken enterprise, Makori maintained that if things went wrong at the food kiosk, he would not be able to provide for his family. As to the impact of his wife's new business on the chicken project, he only lamented thus:

"If my wife would be around most of the time, we would now be having about 100 chicks and not the 20 or so chicks that we now have. When the hens want to hatch, my wife notices easily and promptly prepares eggs and nests for them. As for me, I would not know. Before she took up the new business she used to spend most of her time looking after them and so she had come to understand their behavior very well. Because her business shows good prospects, she cannot abandon it for the sake of the chickens. We will see how best to take care of the chickens."

A different pattern was observed among households that placed greater premium on urban agriculture whether as a source of food or (particularly) income, and where the activities to be performed were time-specific. In such cases household members would occasionally suspend other livelihood activities to attend to

gardening. Onger's⁹ and Mhubiri's¹⁰ cases illustrate the role of seasonality and time specificity in labour allocation in favour of urban agriculture (see also Chapter 10).

A retired teacher, Onger had informally opened his own primary school in Langas estate, where he spent most of his time on day-to-day management of the school. He owned a one-acre plot in another estate (Jasho Farm) where he grew Irish potatoes. He had also rented two acres on the outskirts of Langas, where he had planted maize. When asked about how his school management duties related with urban agriculture, he had this to say: "When there is need, I can skip my school duties to go and do farm work. I have put there someone to take care of the plot but I go there from time to time because it is far and my wife cannot manage to look after it. (...) With these two plots I always ensure that I am there myself to ensure that everything is done the way I want."

On his part, although Mhubiri had started participating more in urban farming, it was his wife and children who continued to do most of the work on the plot. He only participated in farm work when he had some free time and, when he did, he performed some specific tasks, namely, looking for chemical fertilizer as well as sourcing and applying pesticides and fungicides. However, sometimes he had had to "suspend other activities to come and participate in urban farming especially when it rains because the rains cannot wait for you".

⁹ Interviewed on 7 June 2009.

¹⁰ Interviewed on 30 May 2009.

Access to farming resources

This chapter is about households' access to farming resources and the gender differences in access patterns. Various resources across the five asset/capital categories – i.e. natural, physical, financial, human and social – were required for farming and accessed to varying degrees by the farming households, and by men and women within those households. Land and, to a lesser extent, water were among important natural assets for urban farming. Physical assets – which are considered here in terms of conventional farm inputs (see Prain 2006) – included fertilizers, pesticides, seeds, animal breeds, etc. Other assets included financial resources (financial capital), farmers' agricultural knowledge and information (human capital), and social connections and networks (social capital). As will be apparent in this chapter, these assets were interconnected in multiple ways with some providing the means to access others. Moreover, the level of access to the assets by men and women both reflected social norms and gender relations, but also the changes in the socio-economic context.

Access to land

Although its value as an asset in livelihood construction for urban households is considered less significant (Rakodi 2002a; Mandel 2004), land is no doubt the primary capital asset for urban farming households. "Urban farming requires some land space, irrespective of whether the farming system is soil-based or not" (Mubvami *et al.* 2003: 1). Yet inaccessibility to (adequate) land is arguably the most prevalent constraint to urban crop cultivation and livestock keeping in Kenya (Lee-Smith *et al.* 1987; Dennerly 1996; Freeman 1991; Foeken 2006) as elsewhere in sub-Saharan Africa (Zalle *et al.* 2003; Brock & Foeken 2006; Simatele & Binns 2008; Lynch *et al.* 2001). This section describes the farming households' agricultural plots, and provides an overview of how the households

gained access to the plots. It also highlights households' tenure and use rights over agricultural plots and how these varied with gender.

The plots

The 160 farming households had access to a total of 200 plots, putting the average number of plots accessed by a household at 1.25. The majority of the households (81%) carried out urban farming on single plots. Only 31 households cultivated more than one plot, with two of them cultivating five plots each; the highest number for any household. Ninety one percent of the plots were located within Langas estate itself. Of these, 84% (N=181) were found within the farming household's compound and 16% outside the compound but within the estate. The rest (19 in all) were spread over nine other estates across the municipality.

It was more likely in male-headed households that the husband was the plot owner or the one responsible for renting or, through other means, securing access to land for farming. Out of the 162 plots farmed by male-headed households, women were responsible for the acquisition of only 21 plots, and 16 of these were acquired jointly with their husbands. About one-half of the 33 female household heads had themselves acquired the plots they farmed. The rest carried out farming activities on plots acquired by their late husbands (in the case of widows) or by another family member.

The higher access rate to urban plots by men in male-headed households can be attributed as much to men's relatively better economic status compared to women's, as to cultural norms that exclude women from inheriting land – and indeed other properties from their parents. Although land ownership through inheritance was not common in Langas, with many interviewees having moved there only recently, interviews with two men who inherited land from their parents and three widowed women who lived on plots acquired by their dead husbands were revealing. Whereas the men in question said they owned the land, the women referred to the land as their husbands'. Although many widows, upon their husbands' demise, took full control of their husbands' plots and enjoyed all use rights over the plots even when they had grown-up sons, they did not usually seek legal transfer of ownership of the plots. They tended to hold the land in trust for their sons instead.

The higher levels of non-ownership of land among women can also be attributed to undervaluation of women's contributions to overall household well-being, and to cultural practices that socialize women into believing that land and 'major' investments are a preserve of men. It was clear in some cases that women had played an important role in purchasing land, either directly by contributing money or indirectly by taking responsibility for smaller household expenditures thereby enabling their husbands to accumulate savings for land purchase.

Granted, women's fragmented domestic expenditures may appear insignificant compared to the lump sum cost of land and are therefore usually not factored into the property ownership equation. Yet even where women had directly contributed towards land purchase they were not necessarily enjoined in ownership; joint ownership was simply presumed on account of marriage and especially having children. Sonkoro's story clarifies this point. After receiving Kshs. 45,000 in lumpsum from a rotating savings and credit association (ROSCA) in September 2008, he added the money to his wife's savings and bought a plot, which he registered in his name alone. Asked why he left out his wife's name despite her contribution, he reasoned that his action "does not exclude her from owning the plot. In any case the plot belongs to her children."¹ Similar explanations for excluding women from land ownership were widespread:

Although the plot is in my name, it is also hers because she is my wife.

(Njoroge, 23 May 2009)

This plot is mine but of course my next of kin is my wife.

(Mhubiri, 30 May 2009)

I am the owner of the two plots. When I was buying the plots, I knew I was buying them for the family and my wife is my successor. When I am gone it is her children who will benefit.

(Baba Daddy, 7 June 2009)

Such attitudes seem to underline the view that married women cannot own land in their own right and that men's monopoly over land is somehow incontestable. This view was so entrenched in the cultural structure that women seemed not only resigned to it but sometimes also perpetuated it. One interviewee recounted his wife's role in the transactions involving his plot as follows:

(...) after negotiations to purchase the plot, it is my wife who undertook the necessary transactions for the plot. I gave her the money to pay the plot seller. She only brought me the agreement to sign. She is the one who decided that the plot should be transacted in my name as the head of the family (...) I would not have minded if she had chosen to include her name. After all she deputizes me and she is the one who takes care of the plot.

(Wandera, 30 May 2009)

Although such concessions over land entitlements by women to their husbands may readily be associated with the less-educated women and especially those economically dependent on their husbands – as indeed was the case with Wandera's wife, Auma – in reality, the trend was prevalent among educated and economically independent women as well. Chebet's story demonstrates this. With post-graduate education and training, Chebet worked as a civil servant in the Ministry of Health until her early retirement in 1988 occasioned by public service restructuring. Subsequently, she worked for a non-governmental organization until 1997 when she finally retired to concentrate on urban farming. She kept

¹ Interviewed on 22 May 2009.

dairy cows, and sheep, and grew vegetables. Accredited by the Kenya Dairy Board as a milk handler having undergone training on the same, Chebet operated a milk kiosk on her farm. In addition to own-farm production, she received and pasteurized additional milk from other farmers. The farm and her business earned her ‘good money’, of which she was personally in full control. Chebet’s husband worked in another town and was not a regular co-resident of the household. A self-proclaimed strong advocate of gender equality, Chebet once pulled out of a women group because, as she put it “whereas I advocated women emancipation and autonomy, the other women were busy submitting to their husbands.” Yet she never contested her husband’s monopoly over the ownership of land, only rationalizing the status quo thus:

Our Langas plot was bought by my husband. I did not make any contribution. However, that has never affected my use rights over the plot. If anything, it is me who uses the plot and whatever I do is for the benefit of my children. Ownership of land is not so important; when you die you can’t go with it. So long as I am allowed to use it and help my children I don’t care about the rest.

(Chebet, 23 May 2009)

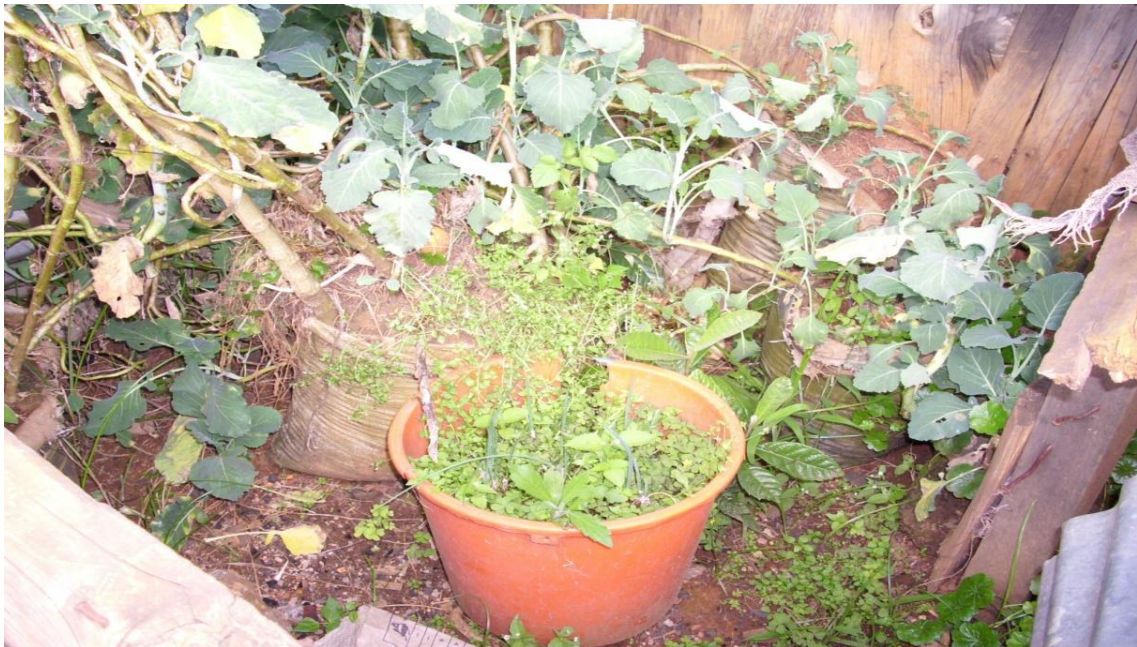
With regard to size, the agricultural plots varied considerably, ranging from 5 square feet to more than two acres. The biggest plot measured 6,000 m² or 1.5 acres and the average size was 460 m². On average, female-headed households cultivated smaller plots (average size of 365 m²) than male-headed households (480 m²). The former were also less likely to cultivate plots outside Langas estate. Among the 19 plots located in other estates in the municipality, only one was cultivated by a female-headed household. Yet accessing land in multiple locations has important implications for household food situation. It enables households to take advantage of diverse ecological conditions of different geographical locations, and spreads the risk in case of crop failure, destruction or theft.

The farmers did not seem to have much of a choice in terms of how much land to cultivate. Most plot owners cultivated whatever space was available around their dwellings. On the other hand, tenants relied on the goodwill of their landlords and cultivated whatever space the landlord allowed; although some tenants may have practiced farming on their landlord’s plots without the latter’s express permission. Thus, although all the participating households had access to land of some kind, the land constraint was nonetheless readily apparent from the expressed desire for extra space for farming among an overwhelming majority (91%, N=200) of the respondents. The land constraint also manifested in the conversions of all manner of spaces around and in-between dwellings, and in such improvisations as the planting of crops in sacks, buckets and tins. As to how they would utilize additional space should they access any, most respondents in-

Photo 7.1 Sukuma wiki grown in-between structures in Langas



Photo 7.2 Vegetables grown in buckets and sacks in an urban farmer's backyard



licated their wish to expand the scale of production and/or diversify agricultural activities. While basic food crops – particularly maize and vegetables – cultivated for home-consumption dominated the respondents' wish lists, a strong income motive was also expressed. In other words, from the perspective of the urban farmers of the urban farmers, enhanced access to more land would improve the food situation and income levels of their households.

The main handicap to enhanced access to (adequate) land, as identified by 92% of those who desired extra space for urban farming (N=182), was a lack of financial capital. Others did not have information about where to get land (4%), or lacked connections to facilitate its acquisition (2%). Only 18 respondents (or 9%) said they did not wish to have additional space for urban farming. This small minority predicated their position on various reasons. Six of them simply could not afford to cultivate an extra plot,² four saw urban agriculture as an unimportant livelihood activity, while one respondent was discouraged by official and legal restrictions on agricultural activities in the town.

Tenure and use rights over land

With regard to tenure and use rights over land, 76% (N=200) of the plots were self-owned by the farming households. These self-owned plots were found among 124 households. Notwithstanding municipal council planning regulations and urban agriculture restrictions, the farming households largely enjoyed freedom of access to and use rights over such plots. However, as shall become apparent below, intra-household inequalities in access and use rights between men and women were reported. On the other hand, access to the 48 plots that were not self-owned was dependent upon financial capital and/or social connections. Such plots included 30 open spaces around farming households' rented dwellings that were used for farming mostly with the consent (express or tacit) of the plot owners. While some of these plots were used for agriculture at no extra charge over and above the rent paid for the dwellings, in other cases the tenants were required to pay for the plots. Some households also used plots under their care that belonged to a friend or relative of a household member (11 in all), or to an institution (four plots). Three households rented agricultural plots outside their compounds.

² One farmer in this category said he would prefer to intensify agricultural production on the available space instead should he access financial resources. A recent retiree of a multinational company, the farmer possessed two plots measuring a total of 2½ acres. At the time of the survey, the farmer cultivated a variety of crops including *sukuma wiki*, bananas and cassava in his home garden measuring 0.5 acres. On the second plot, which was located in a different estate, he cultivated maize. In both cases, the farmer lamented poor returns and contended that he would venture into intensive horticulture and, probably, dairy goat farming once he received his retirement benefits.

As would be expected, a household's continued access to, and freedom of use over land belonging to someone else was not always guaranteed or open-ended, but rather dependent upon the whims of the landowner. Onyancha's story illustrates how some urban farmers grappled with loss of access to, and diminishing farming space on such land as well as restrictions on its use.

Onyancha (31 years old) and his wife Moraa (27) cultivated a plot belonging to a church of which they were members. The couple moved to stay on the church compound in a small room adjacent to a temporary church building in 2005, where they served as caretakers of the church compound and property. During the first interview with the couple in November 2007, they had grown a wide variety of crops including onions, *sukuma wiki*, cabbages, tomatoes, Irish potatoes, green pepper, *suja*, *saga* and pumpkins on a portion of the plot measuring approximately 220 m². The garden was intensively farmed and well-tended. They had just harvested maize and beans. The garden was very important for the couple as both a source of food and income. Moraa operated a kiosk in the neighbourhood where she sold groceries. She used to get part of the supplies from the garden.

By the time of the second interview in May 2009, the plot that the couple had cultivated previously had reduced in size by about one third from approximately 220 m² to about 150 m². Plans were supposedly underway for the church to start assembling construction materials on site in readiness for putting up a permanent building and as such more space needed to be created on the plot where the materials would be assembled. Besides, Onyancha noted that the church had asked him not to grow maize anymore on account that, on maturity, the crop obstructed the church and made it difficult for the would-be worshippers to see it. He had therefore resorted to planting only short crops. He was planning to prepare his plot for planting cowpeas, pumpkins, *saga* and potatoes. Onyancha expressed fears that he might not be able to do any farming on the plot the following year (2010) once construction commenced and, more so, upon completion. Moreover, his wife's kiosk, like many other roadside kiosks in Langas, had been pulled down by the municipal council and Onyancha was worried that he might not be able to find an alternative shelter for his wife's business, which was the main source of income for his household. After the kiosk was pulled down, the wife went to their rural home in Kisii where she would be for some time.

When I visited the place again in June 2010, the church had not commenced construction. However, Onyancha was not home and the plot was unattended. I found a small group of women organizing the church hall for the following day's church function. One of the women, supposedly a church leader, said that Onyancha had gone to the rural home where his wife had been for several months, but that he would return. Asked whether he was still farming on the plot, the woman replied thus: "the young man should have known from the beginning that this was a temporary place for him and he should have organized himself to find an alternative plot to do his farming. We want this place to be open so that people can know what is going on here."

The women who cultivated land that was singularly acquired by their husbands could also be considered among those with tenuous use rights over urban agriculture plots. Their situation was captured by a male participant in a focused group discussion who contested women's supposed role as key players in urban food production when he observed that "if the man does not want any farming to be done on his plot, the woman won't farm."³ However, as in the case of Chebet referred to in the preceding section, non-ownership of land for many women did

³ Focused group discussion held on 31 August 2007.

not necessarily deny them access to or limit use rights over their husbands' plots for farming. On the contrary, and as Chapters 9 and 10 will demonstrate, many women enjoyed considerable freedom of access to, and use of the plots for farming and exercised greater control over the proceeds. Nonetheless, it was apparent that most women remained alive to the fact that ultimate authority over land lay with their husbands and were often constrained to seek their husbands' permission before using the land for agriculture. In a few cases permission was denied if the man wanted to put the land to alternative use:

We have a big space in this compound and I once suggested that we plough and grow vegetables but my husband declined. He said he plans to buy more cows that will need more space (...). In future I plan to keep some chickens and cows (...). I also want to own something so that I won't depend on him for everything as I do now.

(Nekoye, 21 June 2009)

Nekoye's situation underscores the importance of access to land for urban agriculture for women as a means of achieving autonomy and enhancing their agency. Only in rare cases did women use household land for urban agriculture as they chose or insist on using it against their husbands' advice. When they did, it was more likely because of one or a combination of various factors: the husband was not a regular co-resident in the household, had a more important source of income elsewhere, or had no immediate alternative use for the land. It was also likely that the woman was a significant contributor to household sustenance with enhanced bargaining power, or farming was so critical for household survival that they were prepared to defy their husbands. As will be demonstrated in Chapter 9, men did sometimes tolerate such agency by women and in time, even supported their wives' efforts including allowing them greater access to household land for farming.

Apart from a few exceptional cases such as the one involving Mama Daddy that has been referred to above, men generally enjoyed unlimited use rights over land to which their households had access. It should be recalled that men owned (or met the cost of leasing) most of the plots. As Nekoye's situation referred to illustrates, when men's interests conflicted with those of their wives over the use of land, the former's interests often prevailed. And if women had any chances of negotiating access to land for urban farming and to the proceeds from agricultural activities, the chances were more limited when it came to using land for other productive activities, most notably housing, which was generally a monopoly of men (see Muhonja's case below). This was largely because agriculture was treated more as a household survival strategy and, most importantly, as a transitional activity that could easily be relinquished if an alternative and more profitable use was to be found for the land. On the other hand, housing was considered a long-term investment and implied permanent use rights over land, which most

men seemed unwilling to cede to women. In any case, investing in housing required relatively higher levels of financial capital to which the majority of women had little access.

Muhonja belonged to a women group that was formed for purposes of accessing credit from a micro-finance institution. After saving through the group a total of Kshs. 5,000, she applied for and received a loan of Kshs. 50,000. She used the money to put up four semi-permanent rental houses on 'their' Langas plot to add to the 15 that her husband had built earlier. She also belonged to a ROSCA consisting of 40 members in which they contributed Kshs. 500 each, weekly. When she received her payout from the ROSCA, she used part of the money to complete her houses and invested the rest in a grocery business. Not only did Muhonja consult and secure the support of her husband before embarking on the housing project, she had also earlier contributed towards the purchase of the plot.

Because of the high demand for housing in the estate, Muhonja's houses were occupied immediately on completion earning her Kshs. 700 each per month. In the initial months she personally collected and used rent from her four houses and her husband continued to collect and use rent from his 15 houses. However, soon the husband demanded to collect rent from Muhonja's houses as well. She protested but eventually gave up the houses and decided to concentrate on urban agriculture and the grocery business. Some of her grocery stock originated from her home garden. She could make up to Kshs. 200 per day, most of which she dedicated to household expenditure. Muhonja noted that the 'good thing' with urban farming and the grocery business was that her husband did not interfere.

(Muhonja, 2 June 2009)

Muhonja's case illuminates skewed power relations at the household level that limited women's access to resources. Thus, although many women desired to own property of their own as a means of reducing their dependence on men, ownership of property could not necessarily enhance their use rights, let alone guarantee control over the same. This is particularly the case with land, control over which epitomizes men's masculine identity and paternalistic status in society. It is for this reason that many married women did not even consider buying personal land as a top priority. The few who did tended to consider ways of keeping such holdings secretive because, as one such woman observed, "once I tell him (the husband) about the plot, it ceases to be mine".⁴ In this respect female household heads could be considered 'luckier' as they exercised full control over household plots and in most cases made all the decisions regarding the use of those plots. It may also explain why a higher proportion of female-headed households than married women had personally acquired land. As was indicated above, however, female-headed households accessed smaller plots compared to those (potentially) accessible to married women.

⁴ Shimuli, interviewed on 27 June 2009.

Access to water

The majority of the farming households in Langas accessed water within a short distance of their dwellings and for most of them (87%, N=160) the water sources were reliable all-year-round. Shallow wells were the commonest water sources, followed by piped water. Seventy percent of the households relied on shallow wells for water, with 87% (N=112) of these having wells within their own compounds, while 13% accessed them in the neighbourhood. Piped water was found within compounds of 31% of the households, while 19% accessed it in the neighbourhood. Just over one-third of the households had multiple water sources on their plots, mostly wells and piped water.

Many households used tap water mainly for drinking and cooking, while water drawn from the wells was put to other domestic purposes. Although access to well water was largely cost-free, the water was considered – and indeed has been proven (Kimani-Murage & Ngindu 2007) – to be less safe for drinking and cooking. It may be surprising however, that well water was not widely used for crop irrigation despite its widespread and all-year-round availability and ease of access. Only 12% of the farming households used well water to irrigate their gardens. In any case, such irrigation was in most part not full-time but rather restricted to only a few stages of the crop, mainly during transplanting.

Some households did not (always) use water from the wells for irrigation, ostensibly because drawing water manually was cumbersome. Several households involved in crop cultivation for income preferred irrigating with tap water instead, apparently because the returns to irrigated gardens more than compensated for the cost of tap water. The relatively low water tariffs relate to the fact that the water supply system in Eldoret is based on gravity flow rather than the more expensive pump-based system (Owuor & Foeken 2009). However, using tap water for irrigation was prohibited by the municipal council and therefore potentially risky for those involved. A female respondent from a prominent vegetable farming household in Langas complained about harassment by municipal council officers who, on several occasions previously, had threatened to take unspecified punitive action against her household for allegedly irrigating crops with ‘stolen’ municipal water.

Farmers whose participation in crop cultivation was not primarily based on the income motive were less inclined to use tap water (which they considered to be expensive) or to irrigate at all. Prohibitive municipal regulations and water bills were not the only reasons for non-use of tap water for irrigation. Sonkoro remarked that he would have wished to irrigate his plot to maximize returns during the dry weather but that he needed a powered water pump which he could not afford. As to why he did not consider using tap water, he explained that “if you use

tap water you may reduce the water volume and cause water shortages for neighbours. This could bring about conflict.”

Overall, the majority of the farmers adapted their farming systems to rainfall seasonality. Successive cropping was particularly common. It entailed cultivating different crops at different times of the year depending on their adaptability to seasonal variations. Intercropping and mono-cropping were also practiced. The former involved intermixing of more than one crop on a plot and the latter entailed cultivation of a single crop on a plot or a portion of it. Often the farmers practiced both systems in succession as a way of diversifying crop cultivation to enhance household food security and income. That is, they grew either single crops or a number of crops during different seasons, or on different portions of their plots. Mama Sella’s account exemplifies this strategy:

We plant various types of vegetables including *sukuma wiki*, *suja*, *saga* and spinach in January using tap water. We have a well but it is tiresome and cumbersome to draw water from it. (...) In April we plant maize which produces about three sacks for our own consumption. We clear the field of maize towards the end of September to plant cowpeas. We don’t plant the entire plot at once. We plant a few rows every two weeks so that the whole garden does not mature all at once. We also leave a section for planting other vegetables like *suja* and *saga* in January. We start harvesting cowpeas in January until mid-March when we clear the plot once again in readiness for the next maize planting season in April. In a normal season cowpeas earns us up to Kshs. 1,000 per week for 6 to 8 weeks.

(Mama Sella, 30 may 2009)

Access to financial capital

As the primary means by which most productive assets and inputs required for agricultural production may be accessed and solutions to most problems experienced by farmers resolved, financial income is an important capital asset in urban agriculture. Yet many urban farming households in Langas generally had limited access to financial resources not only for investment in urban agriculture, but also for overall household well-being. The various extension services providers identified access to financial support and credit as one of the major issues over which urban farmers sought advice and assistance. Financial constraints partly explain why only few households engaged in high value agricultural enterprises (e.g. dairy farming) that required relatively high levels of initial financial investment. It has already been noted that a lack of financial resources also constrained farmers from accessing more land to expand their scale of production, diversify production and optimize productivity of available spaces by investing in appropriate modern intensification techniques and farming practices. Since female-headed households were overrepresented among the poorest category of households (see Chapter 3), it can be construed that they would have had compara-

tively more difficulties accessing financial capital necessary for agricultural investment.

Only four respondents – three women and one man – reported having received external financial support for urban agriculture in form of credit. This relates, in part, to the general absence of micro-credit facilities specifically tailored for urban farmers; existing micro-credit institutions focused more on non-farming business enterprises. Moreover, the farmers were also not organized into farmers' groups, a prerequisite for accessing assistance from farmers' support programmes like the Eldoret Catholic Diocese's Agriculture and Food Security Programme (see below). In any case, even the micro-credit institutions generally provided credit through organized groups. In the latter case, women were the main beneficiaries since they were more involved with groups based on social networks of solidarity and mutual aid. Such groups provided an important infrastructure for women to access credit from not only formal microfinance institutions but also from internally generated savings (see Chapter 8). Thus the fact that only three women reported accessing credit for investment in urban agriculture reflects the fact that credit accessed through social networks was rarely (re)invested in urban agriculture, even though urban agriculture formed an important basis for women's participation in social networks (see Chapter 8). This further underlines urban farmers' limited regard for urban agriculture as an important business that required financial investment to boost productivity and profitability. Among the few people who (re-)invested their credit in urban agriculture was Auma. After receiving a lumpsum payout from a ROSCA in April 2009, Auma and her husband decided to purchase a chaff cutter machine, which they deemed necessary for mitigating scarcity of animal feeds during the dry spell.

Among important household sources of financial resources for agricultural investment included personal savings and income from non-farming livelihood activities. It was apparent in Chapter 6 that the costs of initial investments in urban agriculture – including purchase of land and inputs – were mostly borne by men. While for many men such investments were considered more as a means of facilitating their wives' involvement in a minor but important source of household livelihood, they themselves would eventually take more interest in the activity and re-channel more resources to urban agriculture once their non-farming income earning opportunities diminished (see Chapters 8, 9 and 10).

As was further demonstrated in Chapter 6, although many women participated in non-farming income-generating activities to supplement their husbands' livelihood sources, men generally had better access to finances than women owing to the former's higher participation levels in the informal labour market, the type of activities they engaged in, and their greater spatial mobility and flexibility with which they deployed their labour. Furthermore, many women exercised little

control over their incomes in terms of how the income could be spent and/or invested.

Another important source of income for urban farming households was the sale of urban agriculture products. Sale of livestock was a particularly important way of raising ‘quick money’ to attend to urgent financial needs. Sheep, pigs, chickens and, to a lesser extent, cows were the most important liquid assets among the livestock. In fact, this was the main reason why many households kept livestock in the first place. There were also many instances where households sold livestock in order to raise money to invest in other forms of urban agriculture. It was particularly common for one type of livestock to be sold in order to purchase another. This was an important way of building and upgrading assets as well as diversifying household livelihood sources. For instance, when Obachi⁵ turned to farming after losing his formal employment, he started by keeping pigs. He later sold some pigs to buy a dairy cow to provide milk for his family and to generate some income as well. Redempta,⁶ a single woman, started in the mid-1990s by keeping chickens and ducks. She later (in 2000) sold part of the stock to invest in sheep. By 2007 her stock of sheep had grown to 30, part of which she planned to ‘convert into a dairy cow’ in order to save on the money she used to spend on milk.

As will be demonstrated in Chapters 9 and 10, income from crop cultivation was in most part controlled by women. Although the ownership of livestock was generally open to men and women, men tended to own large livestock while women mostly owned small livestock. And unlike men who would readily proclaim ownership of their livestock, women who owned large livestock were more restrained from publicly claiming such ownership, especially if the livestock constituted an important household asset. The following comments by women respondents are instructive:

Although I am the one who bought the animals, I do not regard them as mine. It is not right to do so in our culture.

(Auma, 30 May 2009)

I contributed towards buying the sheep we own. But if anyone asks me who the owner is, I will say it is my husband.

(Naliaka, 1 August 2009)

Such comments illustrate how social norms that define appropriate wifely behaviour and conduct can constrain women’s self-advancement and limit their bargaining power within the household. Moreover, by refraining from asserting ownership over their property as is socially expected of a ‘good wife’, women’s contribution remains largely invisible at the community level as well. Of particu-

⁵ Interviewed on 6 June 2009.

⁶ Interviewed on 26 May 2009.

lar relevance here is the fact that in some instances cultural norms seemed to also limit women's freedom to sell large livestock over which they had ownership rights (see Chapters 9 and 10). In other words, large livestock held greater significance as liquid assets for men than for women. And although the latter enjoyed more freedom over the sale of small livestock, such livestock generated more limited income.

Land has been touted in literature on Africa as important collateral for accessing credit from financial institutions and as a source of gender inequalities on the basis that it is predominantly owned by men. However, although most of the household plots in Langas were owned by men, the plots were not titled and therefore could not serve as collateral. Thus, plot ownership by itself did not advantage men over women in terms of providing the means for accessing financial resources.

Access to agricultural knowledge and information

High and sustainable agricultural productivity require appropriate agricultural knowledge and information essential for the performance of agricultural activities and tasks, adaption and optimal application of inputs and technologies, and for effective management of agricultural enterprises. However, consistent with research findings from other urban settings in Kenya (e.g. Foeken & Mwangi 2000; Foeken & Owuor 2000), and in other sub-Saharan African countries as well (Hope *et al.* 2009; Kiguli *et al.* 2003; Thornton 2008; Toriro 2009), the present study showed that urban farming households had limited and unequal access to agricultural knowledge, information and skills. This is despite the fact that agricultural support and extension services were available in Eldoret and that, as Foeken's (2006) study has shown, professional support does make a difference.

Farmers' education and information forums

The Ministry of Agriculture and Livestock Development, the Catholic Diocese of Eldoret, and private players such as FARMCHEM were among important agricultural extension service providers in the town.

- The Ministry of Agriculture and Livestock Development⁷

The ministry operated an elaborate extension services programme in Uasin Gishu district, of which Eldoret town is the administrative headquarters. The ministry had established six agricultural extension services working units, one for each

⁷ Based on interviews with: Agribusiness Development Officer, Ministry of Agriculture and Livestock Development, Uasin Gishu District, 3 July 2007; District Beekeeping/Marketing Officer, 23 July 2007; Divisional Crops Officer, Kapsaret Division, 22 August 2007; Locational Extension Officer, Pioneer Area, 22 August 2007.

administrative division. The district is divided into six divisions, all of which converge in the town. The ministry further established information desks in various areas of the municipality where farmers could access agricultural information and advice on crop cultivation from extension officers on scheduled days (at least twice every month). Occasionally crop cultivators could also be provided with inputs for free.⁸ An information desk was established in Langas in 2006, and another one was located at the Kapsaret Divisional office within the town's CBD. The veterinary department was responsible for the provision of extension services and support to livestock farmers, which it did in close collaboration with the department of agriculture. Because both departments of agriculture and livestock were under-staffed and under-resourced, the extension services and technical advice and training were provided on a demand-driven basis i.e. farmers were supposed to go to the extension officers and not the other way round, and farmers were mostly encouraged to mobilize and seek such services in groups.

The annual agricultural shows organized by the ministry's Agricultural Society of Kenya (ASK) at Eldoret showground were other important educative forums for farmers in the town. In addition, various institutions had set up stands on a more or less permanent basis at the showground from which interested farmers could receive information and training on various aspects of farming.⁹

• The Catholic Diocese of Eldoret¹⁰

Although the diocese's Agriculture and Food Security Programme did not deal with urban farmers *per se*, it covered parts of the municipality. There were two farmers' groups enlisted in the programme in Langas parish; although both groups operated on urban fringes outside of the study area. In any case, the programme did not discriminate against any interested farmers within its spatial jurisdiction – which included the entire municipality – so long as they were mobilized into groups and fitted within the existing programmes and parish structures.¹¹ Under the programme, farmers were trained in various aspects of modern farming and supported to acquire appropriate farming technologies and build capital assets. The trainings were tailored to the felt needs of the farmers' groups and were conducted in groups, mostly through on-plot demonstrations and occasional field tours.

Where more specialized training was needed, especially for courses and skills that required certification such as Artificial Insemination (AI), selected group

⁸ For instance, in August 2007 extension officers supposedly distributed cowpeas and beans seeds from Kenya Agricultural Research Institute for demonstration.

⁹ They include Agricultural Development Corporation, Kenya Seed Company and Moi University.

¹⁰ Based on interview with: Programme Officer, Agriculture and Food Security Programme, Catholic Diocese of Eldoret, 21 August 2007.

¹¹ The programme used parish structures to mobilize farmers into groups, although membership to the Catholic Church was apparently not a prerequisite.

members would be sponsored for such training. After training, the beneficiaries were expected to train other members of their groups. The diocese would then contribute towards facilitating such groups to utilize the new skills and technologies in improving their agricultural production. For instance, if members of a group experienced problems accessing AI services, a member of the group would be sponsored for AI training as an inseminator. After the training, his/her group would require a semen tank to be able to access AI services. Often the diocese and the concerned group would share the cost of training and/or that of the semen tank.

- Role of private companies: the case of FARMCHEM¹²

Other important avenues for farmer education included demonstration plots established by private institutions, such as FARMCHEM's regional office in Eldoret. A private company that dealt in seeds and agricultural chemicals, FARMCHEM had established a small demonstration garden measuring approximately 80 m² around its offices. The garden contained a variety of crops, including *sukuma wiki*, cucumber, tomatoes, maize, carrots and spinach. The purpose of the garden was to demonstrate the quality and productivity of FARMCHEM seeds when the crops are maintained as recommended and the right chemicals applied. At the time of the survey, the garden was a spectacular view of flourishing crops that constantly attracted passersby, who often stopped by to inquire about the seeds, fertilizers and crop husbandry responsible for the impressive crops, especially *sukuma wiki*. The garden attendant revealed that some town residents had sought his assistance in establishing vegetable gardens for them, noting that "When people see how well our *sukuma wiki* has done and the size of the plot, they are encouraged and most of them say that if they could plant such *sukuma wiki* on their small plots, they would greatly save on the cost of vegetables."¹³

Access to extension services and advice

Despite the existence of farmer educational avenues and forums, only a small proportion of the respondents (5%, N=200) had accessed agricultural training, and extension services and advice. The Ministry of Agriculture's information desks were reportedly underutilized by urban farmers, especially women, although the existence and scheduled programmes of the information desks were widely publicized. As the extension officer in charge of the Langas desk explained:

¹² Based on interviews with: Customer Service Representative, FARMCHEM Regional Office, and demonstration plot attendant, 31 August 2007.

¹³ Demonstration plot attendant, FARMCHEM regional office, 31 August 2007.

On average we receive between six and eight farmers per day. A few come back after a while asking us to visit them and see what they are doing and how they are progressing (...). Usually very few people come to us for advice even if you announce in chief's *barazas* and put up posters informing the public about the dates for our information desk. Maybe people are very busy. Mainly it is men who come to the information desk. Women are not as inquisitive as men about what is happening around them (...). They seem to be so busy with household chores.¹⁴

Besides the supposed pre-occupation with other activities – and with household responsibilities in the case of women – the limited demand for agricultural extension services may also be explained in terms of the farmers' view of urban agriculture as an insignificant activity undeserving of serious attention.¹⁵ This may relate to the generally limited scale of production as well as to the farmers' ignorance about improved farming techniques and technologies that could lead to higher productivity. Asked whether he required any technical advice or any assistance for that matter, one respondent noted thus:

I do not see any need of looking for extension officers. I have never experienced any serious problems with my crops. If pests attack my crop, I know which chemicals to apply. I don't need to seek any advice. Besides this is only a small project that does not warrant such efforts.

(Musyoki, 19 May 2009)

Indeed, even the few farmers who received training and technical assistance were sometimes similarly constrained by cultural backgrounds and/or low literacy levels from making the most of such training and assistance. As an officer of the Catholic Diocese of Eldoret observed:

When you tell a farmer that it makes more economic sense to grow passion fruits as opposed to maize they cannot believe you (...). People believe in growing maize without realizing that they are foregoing more profitable ventures. They are also not able to understand the technical aspects of AI (artificial insemination).¹⁶

The legal framework for urban agriculture did not augur well for wider reach and effectiveness of extension services either. The restrictions imposed by the municipal council on farming and occasional harassment of urban farmers engendered uncertainties about the future of urban agriculture among urban farmers (see Chapter 5) that may have limited the farmers' interest in or ability to fully utilize extension services. Similarly, some (potential) extension service providers may have held back or scaled down their activities for fear of confrontation with the municipal council bearing in mind the EMC officer's caution (see Chapter 5) that if there were any organizations providing extension services to farmers in the town then such organizations were acting in violation of the existing by-laws.

¹⁴ Locational Extension Officer, Pioneer Area, 22 August 2007.

¹⁵ Divisional Crops Officer, Kapsaret Division.

¹⁶ Programme Officer, Agriculture and Food Security Programme, Catholic Diocese of Eldoret, 21 August 2007.

And whereas others did offer assistance to farmers regardless, it can be presumed that such efforts would have been more effective had the EMC legal framework been facilitative of urban agriculture in general, and of a coordinated and structured extension services programme in particular. And as has already been noted, some farmers either considered the scale of their agricultural activities as not worth of expert attention, or their own knowledge and experience as adequate.

The group and demand-driven approaches to extension services favoured by the providers also limited accessibility of the services. As was shown in Chapter 4, farmers' groups were rare in Eldoret. Except for the two groups mentioned earlier in this chapter, there were no other known groups operating within the municipality, and certainly there was none in the study area.

Limitations related to farmers' access to structured extension services meant that the farmers relied largely on traditional knowledge and skills and/or informal networks for agricultural information. Many men and women cited their rural farming backgrounds – i.e. the fact that their parents practiced farming in which they also participated – as both the motivation for taking up urban farming, and the basis for their agricultural practices and choices. Several farmers' accounts also pointed to friends, neighbours and family members as other sources of agricultural information. A few other farmers claimed to have gained some farming knowledge and skills in primary school, through the mass media,¹⁷ or by reading agriculture-related literature.

The upshot is that without expert agricultural advice and information, the majority of farmers might have ended up in some cases adapting poor and inappropriate farming practices. For instance, an officer in the veterinary department¹⁸ explained the dangers inherent in a form of 'collective grazing' that was commonly adapted by livestock (mostly cattle) keepers in the town who could not afford to individually hire herders to look after their animals or to buy market feeds. The practice involved day-by-day 'freelance' herders moving from one livestock keeping household to another offering to graze animals at a negotiated day's fee. They would then take away animals from several client households which they would graze around town and in the evening return the animals to the owners. Whereas this practice alleviated labour shortages for such livestock keeping households, it was fraught with health risks related to transmission of diseases both among the animals and between the animals and humans. The practice is also said to cause the problem of in-breeding and cross-breeding due to uncontrolled mating. Also commenting on urban crop cultivators' failure to real-

¹⁷ One farmer reported that he learnt about organic pest control techniques through a radio programme, which he applied on his plot.

¹⁸ District Beekeeping/Marketing Officer, Uasin Gishu District, 23 July 2007.

ize optimal yields from their urban plots, a representative of FARMCHEM noted as follows:

Farmers want their *sukuma wiki* to be as good as those in our demonstration garden. Often that never happens. They don't use the right inputs. They buy poor quality seedlings from roadside nurseries and plant them anyhow.¹⁹

There was also little evidence of farmers investing in urban-specific intensification techniques aimed at optimizing the productivity of their limited farming spaces or improving environmental sustainability. For instance, only a few farmers practiced container and sack gardening. Irrigation, zero-grazing, and caged chicken production were rare, while green houses were completely absent in the study area. Exotic livestock and high value crop varieties were also uncommon.

Gender differences in agricultural knowledge and skills

Since the large majority of farmers relied on traditional knowledge and skills, and on informal networks for agricultural information, any differences in levels of agricultural knowledge and skills between men and women may be explained in terms of gender division of responsibility, and relative levels of spatial mobility and formal education. Social norms and gender roles have been known to define division of labour in traditional agricultural production, designating specific activities and tasks as the responsibility of men and women. Thus, men and women from farming backgrounds would be expected to be more knowledgeable about, and more able to undertake and make decisions about different activities and tasks related to the traditional division of labour. Spatial mobility also underpinned the informal social networks through which urban farmers accessed agricultural information. Men's mobility and dominance of the public space also exposed male farmers to agricultural knowledge and information that was otherwise unavailable at the household level or in the immediate neighbourhood accessible to women. It has already been mentioned that women were the least likely to utilize information desks for extension services and technical advice partly because of their domestic work burdens. The role of mobility as a differentiating factor in men's and women's levels of access to agricultural knowledge and information were also implied, for example, by a female respondent who explained her husband's role in accessing and applying agricultural inputs as follows:

It is he (the husband) who moves around and goes to town time and again so he knows where to purchase the inputs. He is also the one who understands which inputs are required and when and how they should be applied. He has always done so. As for me, I would not even know where to begin.

(Mama Pita, 17 July 2009)

¹⁹ Interview with Customer Service Representative, FARMCHEM, 31 August 2007.

Also implied in the comments above are differences in literacy levels between men and women, which shaped decision-making and division of labour in urban agriculture to the extent that men's higher literacy levels (see Chapter 3) enhanced their amenability to, and comprehension of, more technical agricultural information. They had a higher likelihood of being able, for example, to read and understand instructions related to the appropriate use of the various inputs sourced from the market.

Access to inputs

Urban farmers in Eldoret derived a number of inputs – especially organic inputs – from the local environment. Manure was an important form of organic fertilizer. It was used by 61% of the crop cultivating households, two-thirds of which sourced it from their own plots, one in every five households obtained it from friends and neighbours, and 7% purchased it from suppliers.²⁰ Crop residues – mainly maize stalks – were also re-used on plots by just over one-third of the farming households. A similar proportion of farmers relied on local seeds and seedlings for crop cultivation. Besides locally available inputs, crop cultivating households also used agricultural inputs purchased from the market. Approximately one-half of the households used chemical fertilizers, improved seeds, and pesticides and insecticides.

It seems, from Table 7.1, that female-headed households were overrepresented among users of local or organic inputs as well as chemical fertilizers, while improved seeds were used to more or less the same extent by both male- and

Table 7.1 Access to inputs for crop cultivation, by gender of household head

Input	Male-headed (n=114)	Female-headed (n=25)
<i>Local/organic</i>		
Manure	59	79
Crop residue	34	40
Local seeds/seedlings	33	44
<i>Market purchased</i>		
Chemical fertilizer	51	60
Chemical pesticides	51	24
Insecticides	18	8
Improved seeds	54	56

²⁰ Respondents from the remaining households did not specify the source of the manure used on their households' plots.

female-headed households.²¹ On the other hand, chemical pesticides and insecticides were applied by male-headed households to a greater extent than by female-headed households (see also Foeken 2006). This could be attributed to prohibitive costs, given women's relatively lower income levels. It could also have been as a result of the women's limited knowledge regarding the use and application of chemical pesticides and insecticides, due in part to their lower literacy levels.

Locally available inputs used by livestock keeping households included animal fodder derived from their own plots, and from other people's plots and open fields. A few cattle keeping households grew animal fodder (mostly Napier grass) on their plots, and others used crop residues – especially maize stalks and leaves – as animal feed. Although prone to contamination, garbage heaps and dumpsites within municipal estates also provided important feeding grounds for urban livestock. Pigs were also fed on urban waste – especially food remains from restaurants and food kiosks. The use of ethno-veterinary medicines was also reported. Besides locally available inputs, many livestock keeping households accessed market-purchased inputs of one kind or another. Of these, veterinary drugs and feed supplements were the most widely used. Table 7.2 shows that the various inputs for livestock keeping were used to more or less the same extent by male- and female-headed households.

Table 7.2 Access to inputs for livestock-keeping, by gender of household head

Input	Male-headed (n=90)	Female-headed (n=27)
<i>Local inputs</i>		
Crop residues	17	15
Urban waste	27	39
<i>Market-purchased inputs</i>		
Improved breeds	8	4
Veterinary drugs	49	50
Ethno-vet. Medicine	8	4
Feed supplements	41	42

The livestock kept were mostly of the traditional variety; in all, improved livestock breeds were raised by only 7% of the livestock keeping households. Although less productive, the former were not only cheaper to acquire but were also considered by the farmers to be more adaptable to local circumstances and less

²¹ Although data on the quantities of the inputs accessed was not captured, it is probable that there might have been differences in this respect between the two household categories.

costly to maintain. Besides accessibility of inputs, the choice of livestock and the system under which they were raised also depended on the municipal council's regulations and their enforcement in practice (see Chapter 5). Despite Eldoret Municipal Council (EMC) restrictions against roaming animals, livestock was confined throughout in just about one half of all livestock keeping instances (48%, N=196). The remaining instances involved some form of free range owing to the small size of plots on the one hand, and to a lack of financial capital to afford (adequate) market feeds, on the other hand. Often farmers combined various systems either simultaneously or at different times, and relied on both locally available feeds and market feeds. For instance, as was illustrated by Mhubiri's case in Chapter 5, in order to guard against their pigs being confiscated or killed by EMC, some pig farmers confined their animals during the day and released them at night to scavenge for food away from the authority's view.

Access to social capital

While the role of urban agriculture in building social capital among urban farming households was more evident (see Chapter 8), social capital as a resource in urban farming was less so but nonetheless important. The value of social capital as a resource in urban agriculture can be construed from its role in enabling farming households to access other capital assets as has been alluded to in the preceding sections of this chapter. It should be recalled that 11 households undertook urban agriculture on plots that belonged to friends, relatives and institutions to which they gained access through social connections. It was also noted that social networks of solidarity did enable a few farmers like Auma and her husband to access credit for investment in urban farming. Social capital particularly enabled urban farmers to access organic fertilizers, local seeds and other locally available inputs. As will become apparent in Chapter 9, women were the key decision-makers with regard to sharing such inputs with neighbours and members of their social networks.

Livestock farmers also relied on social connections to access animal fodder on other people's plots. For instance, because of Ezekiel's good relations with his neighbor, Henrieta, he was able to access Napier grass on the latter's plot, which considerably lessened his burden of looking for animal fodder for his dairy cows in the municipality's open spaces. In return Ezekiel shared milk with Henrieta, who had sold her family's dairy cows to foot her late husband's medical bills. Pig farmers too relied on social connections to access urban waste from food kiosks and restaurants, and from grocers and grocery stalls in the town. As shall become apparent in Chapters 9 and 10, informal social networks constituted important sources of agricultural knowledge and information. Men's extensive networks

particularly led to farming households' adaptation of new farming activities and practices. It is through social networks, for example, that Auma's husband, Wandera, learnt about the significance of keeping dairy cows; so was the case with Waswa's decision to cultivate strawberries.

Other constraints to urban farming

Urban farmers encountered various other problems and constraints, besides those related to access to resources (see Appendix 7.1). Cited by two-thirds of the respondents, pests and diseases was by far the most prevalent problem experienced by crop cultivating households, and more so by female-headed households. It should be remembered that female-headed households, perhaps because of their relatively poorer economic status (see Chapter 3), applied pesticides and fungicides to a lesser extent than male-headed households. Other important ecological problems included inadequacy and unreliability of rainfall, and poor land quality. The former was perceived as a problem due to reliance on rain-fed agriculture which made agricultural activities sensitive to rainfall variability. It is noteworthy that a higher proportion of female household heads mentioned poor land quality as a problem, perhaps because of limited access to chemical fertilizers.

Another significant problem was theft of crops, which was mentioned by one in every five respondents. Compared to other Kenyan urban contexts (see Foeken 2006; Foeken & Mwangi 2000; Freeman 1991), this suggests a lower incidence of the problem. However, this is because the present study focused predominantly on backyard farming, while the other studies included open-space plots as well, which are more susceptible to theft if not guarded. It is noteworthy that theft of crops was also perceived as a problem by a higher proportion of women, especially female household heads, than men. Not only were women involved more in the choice of crops to be cultivated and in taking responsibility for the crops, they also exercised greater control over the use of crop products and income (see Chapter 9 and 10). As such, women were more directly affected by the loss of crops. Generally, theft was mostly done on a small scale for consumption purposes. This was common with vegetables, especially *sukuma wiki*, but also with green maize. Children were commonly mentioned as the primary culprits in the theft of green maize. For this reason, some farmers resorted to planting maize as a means of deterring their children from straying into their neighbours' plots even if maize cultivation was not the most productive use to which the plot could be put. As Njeri explained:

We grow maize because when the season for green maize comes, children normally crave it and if you don't have it on the plot they may be tempted like other children to go into other people's maize and steal. And you can't even think of buying it on the market because it is usually very expensive. So we are forced to grow maize although it is unprofitable and a

waste of space to grow maize for food. I harvest only six *gorogo* (i.e. approximately 12 kg in all) from the plot. But if I were to grow vegetables instead, I would get enough money to buy more than three sacks of grain (about 270 kg).

(Njeri, 19 May 2009)

Besides theft, some farmers with unfenced gardens also complained about destruction of crops by livestock. Marketing of crop produce did not seem to be a problem for most farmers. Not only was there a ready market for the produce, often within their neighbourhoods, many farmers realized only limited surplus that could be sold.

As with crop cultivation, pests and diseases was the most prevalent constraint experienced by livestock keepers, and it seemed to concern women and especially female household heads a little more (see Appendix 7.2). It should be remembered that the proportion of livestock keepers was slightly higher among female-headed households than male-headed ones. Furthermore, chickens, which were some of the most commonly affected livestock, were more associated with women. Since some livestock keepers were also concerned about a lack of financial capital and the high cost of inputs, they mostly resorted to rearing traditional breeds which were considered to be less susceptible to diseases and more resistant.

Other problems perceived by respondents as constraints to livestock keeping included conflict with neighbours, labour shortages, and theft of livestock. Animals straying into other people's plots and destroying crops was the main source of conflict, although pig farmers additionally faced complaints about bad odour and nuisance caused by pigs. As a problem, conflict with neighbours was mostly experienced by women, perhaps because women were the ones mostly available at home and therefore the most likely to be confronted by complainants. Shortage of labour was also perceived as a problem, especially among cattlekeeping households. Labour shortage related both to household composition and households' inability to hire external labour due to lack of financial resources. But as Mudavadi²² explained, the unreliability and lack of commitment of such labour discouraged livestock keepers from looking outside their households for labour.

Mudavadi came to realize how difficult and burdensome it was to keep four cross-breed dairy cows when the herdsman he had hired to look after the animals abandoned his job one morning, forcing Mudavadi to cancel all other engagements in order to take over most of the work, including grazing the animals in open spaces and searching for animal fodder from people's plots. Unable to trust any other person with the job, he subsequently sold the three cows and instead bought one pure breed dairy cow, which he found to be not only more manageable labour-wise, but it also produced more milk and over longer durations.

Considering that the keeping of large livestock was mostly multi-tasked and labour intensive, it is not surprising that female household heads – mostly be-

²² Interviewed on 1 July 2009.

cause they did not have adult males in their households nor financial resources to hire external labour – would be more affected. While the proportion of respondents who cited theft of livestock was small, during the post-election violence – which occurred after the survey fieldwork – many livestock keepers lost their livestock to marauding gangs (see Chapter 4).

Importance of urban farming

The present Chapter examines the various benefits and outcomes that farming households, and individual men and women derived from urban crop cultivation and livestock keeping. The benefits and outcomes are construed from the respondents' motives for taking up urban farming, the use patterns of the various urban agriculture products, and from the varied meanings men and women attached to urban farming and the resultant outcomes. The respondents' perceptions about the contribution of urban farming to overall household food and incomes are also considered. It is shown that while the contribution of urban farming to overall household food and incomes was marginal for the majority of farming households, such benefits were nonetheless greatly valued and bore varied meanings for men and women.

Benefits of crop cultivation

It is apparent from Table 8.1 that urban crop cultivators were motivated primarily by the need to enhance household food security and nutrition, but also to earn and/or save some income. Other motivations included prospects for economic independence, the need to utilize readily available space and, to a more limited extent, culture and/or farming background.

Whereas the food-related reasons influenced men's and women's decision to farm to more or less the same extent, there were apparent gender differences among income-related reasons. Compared with women, men were more concerned about saving money on food expenditure and less so about gaining economic independence. Men generally regarded themselves – as was expected of them by society – as the main household breadwinners who were expected to provide finances not only for the purchase of food but also for meeting other non-food requirements. As such, any food produced by the household would

therefore ease their financial burdens and the money thereby saved – i.e. indirect or fungible income – channeled towards meeting other household needs, including the purchase of other food items.

Table 8.1 Main reason for crop cultivation, by gender (%)

Reason	Male (n=68)	Female (n=112)
<i>Food-related reasons</i>		
Additional food/food security	40	42
Fresh food produce/improved nutrition	4	6
<i>Income-related reasons</i>		
Save money on food expenditure	31	18
Diversify income/investment opportunity	12	11
Economic independence	3	15
<i>Other reasons</i>		
Utilize available space	9	6
No other occupation	0	2
Custom/tradition/farming background	1	0
Total	100	100

Table 8.2 shows that each of the five most prevalent crops was self-consumed by over 80% of the cultivating households, with maize and *sukuma wiki* being the most widely and regularly consumed. A traditional vegetable, *suja* (black night shade) was an important item in diet diversification. A smaller proportion of the households earned some income from crops, notably from *sukuma wiki*, *suja* and spinach. Of these, *sukuma wiki* was the most widely sold crop, often over several months, while *suja* was the most marketable but was usually sold over only a few weeks.

Table 8.2 Consumption and sale of crop products by cultivating households (%)

Crop	Cultivating households	Consumption	Sales
Maize	89	99	11
<i>Sukuma wiki</i>	85	91	64
Spinach	31	84	61
<i>Suja</i>	22	82	50
Bananas	24	83	13

Without any significant gender variations, only one-quarter of the crop cultivators considered home gardening as a major source of food and the rest regarded it as constituting a minor or even a negligible food source (Table 8.3). The urban farming households relied mostly on the market for food supplies. Eight percent of the households supplemented their food sources with own rural food produce, and another 6% made claims on relations and neighbours for food gifts and donations. Given their low and irregular incomes, the more such households depend on the market for food supplies the more vulnerable they are to food insecurity. When respondents were asked whether their households ever faced food shortages, 43% (N=200) of them answered in the affirmative.

The marginal contribution of urban crop cultivation to household food security is largely because of the small scale and limited diversification of crop production (see Chapter 7). Because of the limited space available to crop cultivating households, and because of non-adoption of intensification technologies and appropriate farming practices, many households realized low yields and consumed most of what they produced, leaving little, if any, for sale. And except maize grains that could be easily stored for future use, most other crop products were perishable and, for a lack of refrigeration facilities, farmers were forced to sell the produce even when future shortages were anticipated.

Table 8.3 Perception of the importance of crop cultivation as a source of food, by relationship to household head (%)

	Total (N=180)	Male head (N=67)	Female spouse (N=87)	Female head (N=24)
Only/major source	24	28	24	21
Additional/minor source	59	58	63	50
Negligible source/hobby	17	13	13	29
Total	100	99	100	100

Chi-square: $X^2=0.4.667$; $df=4$; $p=0.323>0.05$.

Contrary to the conventional wisdom that women hold a more favourable view of urban agriculture as a source of food, there were no significant gender differences regarding the urban farmers' perception of the contribution of crop cultivation to household food supply (see Table 8.3). This may not be entirely surprising though given women's reproductive and home-keeping roles, on the one hand, and the difficult economic circumstances that limited men's support for their families, on the other hand. Thus, confronted with a myriad household needs, and with their husbands absent from the home most of the time, many women were often forced to look for alternative food and income sources to supplement

home-produced food, and their husbands' financial contributions. Some women would even sell part of essential home-produced food without the knowledge of their husbands in order to purchase other food and non-food items. If, for these reasons, women's perception of urban crop cultivation as a source of food was relatively less favourable, a comparable view among men may still pass for a more positive perception than is usually associated with them. Thus, because much of women's efforts to respond to household needs were not known to, or were taken for granted and underestimated by their husbands, the latter may have erroneously overestimated the contribution of self-produced food (and of their own income contributions) to the sustenance of their households.

Compared to its contribution to household food supply, a smaller proportion (16%) of the respondents considered crop cultivation to be a major source of household income (Table 8.4). One in every ten respondents – that is, about one-quarter of those who considered crop cultivation to be a negligible source of income – noted that their households had not earned any income from the activity. Whereas some of these respondents may have been simply unaware about some income being generated from home gardens, it was also the case that maize, one of the most prevalent crops, was rarely sold because many households realized only limited output that could last them just a few months, usually two to three months, before they could start buying grains for the rest of the year. Although, overall men and women held a comparable view of the contribution of urban crop cultivation to household incomes, further disaggregation of the data indicated some gender differences in the perceptions. It would seem that crop cultivation was perceived slightly more favourably as a (major and additional) source of household income by female household heads, and especially female spouses than by male household heads (see Table 8.4). As shall be demonstrated shortly, men's underestimation of the economic value of crop cultivation was underpinned by women's concealment of incomes generated from home gardens.

Table 8.4 Perception of the importance of crop cultivation as a source of income, by relationship to household head (%)

	Total (N=180)	Male head (N=67)	Female spouse (N=87)	Female head (N=24)
Only/major source	16	12	17	17
Additional/minor source	45	25	53	38
Negligible source/hobby	39	63	30	46
Total	100	100	100	101

Chi-square: $X^2=17.068$; $df=4$; $p=0.002<0.05$.

Notwithstanding its apparent marginal contribution to overall household incomes, crop cultivation was valued by men and women for varied reasons. The fungible income value of gardening was of particular significance to men as captured by Mhubiri's and Mudavadi's comments below:

The vegetables we grow on the plot are very important for the household. We save money on vegetables. We also buy sugar, milk and other minor household items from the sale of vegetables. Sometimes my children are also able to meet some school needs from the vegetables such as transport to school and books (...). Nowadays I take a lot of interest in urban farming because if I don't I will be the one expected to meet all these expenses. You can't manage at this time. It is very difficult to get money out there.

(Mhubiri, 30 May 2009)

I do not give my wife money directly. Instead I plant it in the soil so that she can get it from there when she starts selling vegetables. That is the only way she can access money whenever she wants it without bothering me since she is the one in charge of selling the vegetables. I normally don't ask for the money unless I am very broke. Otherwise if you give her money once, you will have to be giving her every time. That way you can't save any money for development.

(Mudavadi, 1 July 2009)

On the other hand, because women were more disadvantaged in terms of accessing alternative income sources, they tended to take up crop cultivation also as a means of gaining some economic independence necessary for exercising agency. In other words, they considered gardening as a way by which they could meet practical needs related to feeding their families and, in the process of doing so, also advancing their strategic interests, including gaining autonomy, self-esteem, and enhanced social status in the household and within the community. This was illustrated by the following comments of a female respondent:

If I did not do farming in town, I would not have been able to offer you this cup of tea. I would have had to look for my husband for money to buy milk, sugar and a loaf of bread. I would not even know where to look for him at this time of the day. Even if I am lucky to find him, he will not give me the money without asking many questions (...). The alternative would be to talk to you while just looking at you, yet you are a very important visitor to me. Because I make some money from my *sukuma wiki* garden, I don't ask my husband for small amounts of money and he knows that whether he is there or not, we cannot go hungry in this house. Sometimes he even asks for money from me.

(Mama Atieno, 17 May 2009)

Similarly, although Njeri's husband – who worked in another town and was not a regular co-resident of the household – regularly sent her money for household upkeep, the money was not always enough and Njeri met part of her household's food needs from gardening. On the significance of the home garden to her social standing and autonomy, she noted thus: "although he does not say so, I know my husband appreciates what I do on the plot because whenever he is

around he does not see me bothering him about money to buy vegetables and other minor kitchen items.”¹

As a strategy to achieve some economic independence and autonomy, many women underreported or even totally concealed the income they earned from their gardens (see also Dennery 1996; Maxwell 1995), especially from the sale of *sukuma wiki*. This was possible due to women’s gender roles related to home-keeping, food preparation, garden-tending, and marketing of produce that enabled them to control the use of crop produce and to access income from sales (see Chapters 9 and 10). Secondly, women were able to conceal income from their gardens because many men tended to undervalue the economic significance of home gardens in the first place, and spent most of their time outside the home thereby giving women space to manoeuvre. When asked how much income their households earned from gardening, some men would express surprise that anyone would expect any produce to be sold from such small *mama*’s gardens, yet their spouses would confide that they actually made some money out of the gardens. In one such instance, a female respondent with a small vegetable garden had this to say:

The problem with men is that when they know you have some money, however little, they stop supporting you financially. Moreover, there are other important obligations that require finances, such as contributing to my women’s group and tithing in church, which are difficult to secure from my husband. Therefore, whenever I sell *sukuma wiki* from my garden, I do not tell him. (...). Luckily, he is away most of the time so he never gets to know about it. Thus, he continues to make his usual contribution towards household up-keep. When I put together whatever I earn from *sukuma wiki* and whatever I save from what he gives me, I am able to meet personal obligations and at the same time keep the household going whenever my husband’s income is not forthcoming.

(Mama Atieno, 17 May 2009)

Since my husband does not sell vegetables and he is rarely there when I am selling, I never tell him the exact amount I make from the sales. If I make Kshs. 1,000, which is the minimum I make in a day, I tell him I have made Kshs. 500. Still he thinks it is a lot of money and encourages me to use it wisely so that I don’t bother him with financial requests. I have decided to invest in women’s groups to generate more income.

(Shimuli, 27 June 2009)

As with Mama Atieno and Shimuli (above), home gardening was particularly instrumental in building social capital for many women. Income from urban agriculture, especially from vegetable sales, formed an important basis for women’s participation in credit-based social networks by enabling them to meet their obligatory financial contributions to such networks. By far more women than men participated in such networks. The first of the two most important types of credit-based social networks identified in Langas consisted of rotating savings and credit associations (ROSCAs), popularly known as ‘merry-go-rounds’.

¹ Interviewed on 19 May 2009.

Members of such groups usually contributed equal amounts of money and met at given intervals. The money collected at each meeting was given in lumpsum – what in local parlance is referred to as *pouring* – to one member at a time until all members in the group were reached. The order in which members received their money was usually predetermined, typically by lottery. Sometimes rather than *pour* the money for members, the group could agree to purchase a particular item or set of items for members using the money collected. Mama Sella's story typifies benefits that many women derived from participating in such groups. Her household cultivated a variety of crops including maize and vegetables on just under one-quarter of an acre of land. Different crops were grown during different seasons to mitigate seasonal variability and maximize productivity. Mama Sella was directly responsible for the garden because her husband, a mason and carpenter, was always out looking for work in schools and churches. Part of the farm produce was consumed by the household and the surplus sold to earn some income. Mama Sella made about Kshs. 500 from vegetable sales everyday throughout most of the year. She used part of the money on household food and other non-food essentials, and saved the rest with two merry-go-round groups. One group consisted of 27 members, each of whom contributed Kshs. 200 every week, and the other had a membership of 11 and each member contributed Kshs. 1,100 fortnightly. On how she had benefitted from her membership of the groups, Mama Sella stated thus:

The money has helped me to spruce up my house. I have bought household items like cups, vacuum flasks, and furniture clothing. The money has also enabled me to buy clothes and shoes for myself and my children. When visitors come in you are not embarrassed because the house looks presentable; and myself and my children too. People can tell that you are a responsible married woman who can maintain a house and take care of yourself and your children. (...) My husband does not like me participating in women groups but I will continue (...) What surprises me is that when you serve him with tea in a new vacuum flask and nice cups bought with merry-go-round money he is always very happy (...) The most recent money I received from one of the groups enabled me to assist my daughter. I received the money when she was just about to deliver. Because she got pregnant before marriage, my husband was not willing to take any responsibility so I was left to struggle with her alone. The money enabled me to admit her to a maternity hospital. Fortunately she delivered without any complications.

(Mama Sella, 30 May 2009)

The second category of social networks comprised groups whose main objective was to provide members with the avenue to access financial credit from conventional banks and formal micro-finance institutions, which lent money using the group guarantee model rather than against collateral. Would-be individual borrowers were required to organize into groups and to save money through those groups at regular intervals. After saving with a group for some time, an individual could then apply for a loan, which would be granted based on the mem-

ber's cumulative savings and endorsement by other group members. Some women had accessed financial credit, in some cases substantial enough to constitute major investment capital for their households. One example will suffice.

From a minimum daily income of Kshs. 1,000 that Shimuli² earned from *sukuma wiki* sales, she used about Kshs. 200 everyday on her kitchen budget, and made a daily contribution of Kshs. 200 to a 10-member ROSCA, and a weekly contribution of Kshs. 1,500 to another women's group of 15 members. The latter group was established with the aim of enabling members to access credit through a credit scheme of a local bank. But before she could join the groups, Shimuli had to first ask for permission from her husband, Mudavadi, a well-known vegetable farmer in Langas. Mudavadi was initially apprehensive of the idea claiming that such groups were time-wasting and forums of gossip and that joining them would interfere with his wife's work on the plot. He wanted her to be always available at home to attend to vegetable customers. However, because Shimuli understood the benefits of joining such groups, she sought to allay her husband's fears that doing so would interfere with her work, and managed to convince both groups to reschedule their weekly meetings from week days to Sundays when her children would be at home to attend to the customers while she attended group meetings. Mudavadi reluctantly agreed with this arrangement. After saving for some time with the second group, Shimuli applied for a loan of Kshs. 120,000 after consulting her husband, which she was granted. She used the money to build four rental rooms on their plot, although the money was not enough to complete the rooms. Shimuli was repaying the loan with proceeds from vegetable sales 'without any problem', her husband had become fully supportive of her plans, and he was himself planning to take a loan to complete the rooms. About his wife's progress, Mudavadi³ commented that contrary to his earlier negative perception of women groups, he had come to realize that they were actually beneficial forums, and that "she is nowadays free to join as many groups as she can and to plan for any money she may get from such groups."

The cases presented above highlight some of the varied meanings of social capital leveraged by crop cultivation for women, and the implications of the same for gender relations and well-being outcomes for households and individual household members. For Mama Sella, social capital – and by extension urban farming – apparently held greater significance as a means with which she was able to play her reproductive and care-giving roles more effectively, to assert her gender identity, and to enhance her standing in the community. Conceptually, Mama Sella's account also questions the practical-strategic dichotomization of gender needs/interests. It is clear from her perspective that by being able to fulfil her household's immediate daily survival needs, Mama Sella simultaneously furthered what would be regarded as medium- or longer-term strategic interests (see Hovorka 2006). On the other hand, Shimuli's account shows how social capital built using income from crop cultivation could empower women in terms of enabling them to gain economic independence, to enhance their bargaining power at the household level and, as a result of this, to reconfigure gender relations by earning their husbands' trust as capable decision-makers even in matters that are traditionally regarded men's domain (in this case investment in housing).

² Interviewed on 27 June 2009.

³ Interviewed on 1 July 2009.

Benefits of livestock keeping

As with crop cultivation, livestock keepers, irrespective of gender, perceived livestock keeping as constituting a modest source of food. Table 8.5 shows that almost nine in every ten respondents considered livestock keeping to have made either no,⁴ negligible or only minor contribution to their households' food requirements.

Table 8.5 Perception of the importance of livestock keeping as a source of food, by relationship to household head (%)

	Total (N=148)	Male head (N=49)	Female spouse (N=72)	Female head (N=24)
Only/major source	13	14	13	13
Additional/minor source	36	39	36	33
Negligible source/hobby	51	47	51	54
Total	100	100	100	100

Chi-square: $X^2=0.415$; $df=4$; $p=0.981>0.05$.

The relative insignificance of urban livestock keeping as a source of food could be attributed to the fact that only a limited range of livestock products constituted regular food items in household diets. Only milk, and, to a lesser extent, eggs were regularly consumed by households – 83% of all cattle keepers and 72% of chicken keepers consumed milk and eggs, respectively. Other livestock products were either only periodically or rarely consumed, if at all. Although many farmers who kept chicken, ducks and sheep – 72%, 67% and 42%, respectively – said they had at one time or another slaughtered their stock for home consumption, this happened on very rare occasions. Nonetheless, many households still attached greater importance to the limited, and often rare, livestock food products than the latter's quantitative value as a proportion of overall household food supply would suggest. This was partly for nutritional and cultural reasons. For instance, Wandera lamented the loss of his dairy cow as follows:

“Before my cow died after an accident, I used to take good tea in my house whenever I wanted to. My cow's milk was of very high quality, and there was always milk in my house. But nowadays if I want to take tea I have to buy milk, which is very expensive and you cannot get good milk in the market. Most vendors dilute their milk with water and since I cannot afford milk from the shop, black tea is the order of the day in my house these days.”

Similarly, as negligible as chicken and sheep meat might have been as food sources, their cultural value was much greater among members of the Luhya and

⁴ Seven percent of the respondents noted that their households had not derived any food from the livestock they kept.

Kikuyu ethnic communities, respectively. The chickens and sheep were slaughtered for food periodically during cultural ceremonies, special occasions, and for ‘important’ visiting friends and relatives. Thus for a household of eight, like Mama Ben’s,⁵ five chickens would constitute infinitesimal proportion of household food over several months. But for Mama Ben, the five chickens she kept gave her a peace of mind and sense of pride knowing that she could “comfortably feed important visitors, as is expected of a respectable Luhya woman, at any time even if they found (her) without any money in the house.” The cultural significance of sheep to Kikuyus was underscored by the fact that Kikuyu-headed households were not only more likely than farmers from other ethnic backgrounds to keep sheep – they constituted 77% (N=52) of all sheep keeping households – they were also more likely to have done so as much for cultural reasons as for income.

Much like its perceived value as a food source, livestock keeping was considered by a large majority of respondents to have made either only marginal or no contribution to household incomes (see Table 8.6). Only 8% of the respondents considered it as a major source of household income. On the whole, the contribution of livestock keeping to household incomes was perceived in more or less the same way by men and women.

Table 8.6 Perception of the importance of livestock keeping as a source of household income, by relationship to household head (%)

	Total (N=148)	Male head (N=49)	Female spouse (N=72)	Female head (N=24)
Only/major source	8	6	7	17
Additional/minor source	44	41	42	58
Negligible source/hobby	48	53	51	25
Total	100	100	100	100

Chi-square: $X^2=6.889$, $df=4$, $p=0.142>0.05$

That livestock keeping accounted for insignificant proportions of household incomes owes to the fact that livestock sales were a rare occurrence and only happened at critical moments. The sale of live animals and birds was indeed a particularly important and sometimes only way of raising ‘quick money’ to attend to urgent financial needs. Sheep, pigs, chickens and, to a lesser extent, cows were the most important liquid assets among the livestock. Fifty seven percent of pig keepers and 27% of sheep owners had at one time or another sold their animals to earn some income. Although cows were rarely sold, cow milk earned

⁵ Interviewed on 16 August 2009.

some income for 55% of cattle keeping households (in each case over several months). Among the small stock, live chickens and chicken eggs were the most important sources of income. Forty-four percent of chicken farmers had at one time or another sold chicken eggs and another 46% had sold live birds, although the former was done with greater frequency than the latter.

Though limited overall, the value of livestock keeping as a source of income during critical moments can be illustrated by the following instances:

When Mudavadi's⁶ children were once sent home for school fees when his main business had not earned him any money for several months, he decided to sell three of his four dairy cows to send the children back to school because he did not want them to miss school. Similarly, Muraya⁷ recounted how his mother died in their rural home at a time he had no money in his pocket, and neither did his close friends. Yet as the first-born of his family and with his father already deceased, Muraya was expected to play a key role in his mother's funeral arrangements. Although he had 19 rental rooms – his main source of income – his mother's death occurred mid-month and so he could not ask his tenants for rent. Chickens were the only liquid assets he had. He sold four big ones to a local food kiosk and raised Kshs. 900 which enabled him to travel to the rural home and thereby avoid "the embarrassment of not making it for his mother's funeral on time".

Indeed, compared to the need for food, the income motive was by far a more important factor for taking up livestock keeping among both men and women (see Table 8.7). Given the highly monetized nature of the urban setting, livestock (large ones in particular) were seen as an important form of liquid assets that could easily be converted into cash income to meet lumpsum household expenditures such as education and medical expenses whenever there was need. However, while women – and to a greater extent, female household heads – were more concerned with prospects for earning and/or diversifying income than men, only men (although a small minority) cited the need to save money on food expenditure as the reason for choosing to rear livestock. Such men tended to cede to their wives the power to make decisions about the use of income from the sale of livestock products – mostly milk – often, as in the case of crops, on condition that the women did not ask for regular household budgetary support.

The importance of livestock keeping as a source of income for women could be attributed again to their relatively limited alternative income sources, and to a lack of asset-building opportunities. On the other hand, the limited influence of 'economic independence' as a factor in women's decision to keep livestock (relative to its role in crop cultivation) relates to the fact that unlike income from gardening, it was more difficult for women to conceal income from the sale of livestock products, especially large stock that were the most significant income

⁶ Interviewed on 1 July 2009.

⁷ Interviewed on 19 August 2009.

Table 8.7 Main reason for livestock keeping, by sex of respondent and by relationship to household head (%)

	Male head (N=49)	Female spouse (N=72)	Female head (N=24)
<i>Income related reasons</i>			
Investment/diversify income	55	63	71
Save money on food expenditure	8	0	0
Economic independence	4	6	0
<i>Food-related reasons</i>			
Additional food/food security	14	14	13
Fresh food/improve nutrition	12	11	0
<i>Cultural reasons</i>			
Custom/farming background	4	6	4
<i>Other reasons</i>			
Hobby/pastime	2	1	4
Had no other occupation	0	0	8
Total	99	101	100

sources. In any case, and as shall be shown shortly, cultural norms, unequal power relations, and limited financial endowments constrained women's ownership of, and access to incomes accruing to the sale of large stock.

While large livestock constituted an important fallback for households with regard to meeting lumpsum expenditures, at a personal level men and women benefitted from livestock keeping differently and unequally. Large livestock held greater significance as liquid assets for men than for women. And although women enjoyed more freedom over the sale of small livestock and related products as well as cow milk, such livestock products generated more limited incomes that were in any case mostly used for household expenditure. In most Kenyan communities large livestock were traditionally considered the property of men. The continuity of such cultural norms was evident among livestock keeping households within the urban context. Besides, the keeping of large livestock – especially dairy cows and pigs – required considerable financial investment, technical knowledge about animal husbandry, and high labour input. Access to these resources was generally skewed in favour of men. As such, women were underrepresented among owners of large livestock, but were associated with small livestock to a greater extent than men (see Chapter 7).

Of particular relevance is the fact that cultural norms seemed to also limit women's freedom to sell large stock over which they had ownership rights. Mama Sella's story is illustrative:

When you have an emergency, you can sell sheep quickly to solve the problem. But whenever that happens, it is my husband who sells. He can sell even without telling me. He will

just say he wants to sell and you cannot object. As I grew up I never saw women sell sheep or cattle; it is men who do. Even when I want to sell my sheep we have to agree with my husband then he will look for someone to buy. But I can sell chickens and ducks without telling him.

(Mama Sella, 30 May 2009)

It must be pointed out though, that unmarried women were not as restricted as their married counterparts regarding ownership of large livestock and access to income from livestock sales. Thus, whereas Mama Sella contended that women from her Kikuyu ethnic community traditionally did not sell sheep (and cows), it was the case that many unmarried Kikuyu women in Langas kept sheep and were personally responsible for sales whenever they wanted to. One such woman put it this way: “Any time I have an urgent problem that needs money, I personally walk to the butchery and the butcher will come running. They know I keep good quality sheep and the demand for sheep is so high that I will always get the right price.”⁸ On the whole, female heads of households generally exercised greater control over household assets and enjoyed greater autonomy and decision-making power even when they had grown-up sons and other adult males in their households (see also Chapter 9). This may partly explain why the proportion of female household heads was slightly higher than married women among farmers who took up livestock keeping as an investment or as a means to diversify their income (see Table 8.7 above), and why female household heads perceived livestock keeping as a source of household income more favourably than married women (see Table 8.6). Furthermore, as alluded to in Nyambura’s comments above, freedom of mobility also meant that female heads of households had better access to market information and could therefore appropriate available market opportunities, including selling their livestock, without recourse to male patronage. Such conclusions challenge one of the basic propositions of ‘the feminisation of poverty’ thesis that female-headed households are some of the poorest of the poor and that their well-being circumstances are worse off than those of male-headed households. The conclusions somehow validate the contention that female-headship may in some instances by itself lead to better livelihood outcomes and well-being for women and other household members (Baden 1999; Chant 2007; Angeles 2009).

However, despite men’s control over large livestock – which constituted important income sources – the high labour requirements involved in rearing the livestock necessitated greater consultations and responsibility sharing between spouses and, as a consequence, women used their labour contribution to negotiate access to income from livestock sales (see Chapters 9 and 10). The implication of this – in addition to the fact that married women were restricted by gender norms

⁸ Nyambura, interviewed on 28 May 2009.

from selling large livestock by themselves and often relied on their husbands to access the market – is that both spouses came to understand the real economic value of what in most instances were more or less joint ventures regardless of livestock ownership claims. It is not surprising therefore that the perceptions of married women and male household heads as to the contribution of livestock keeping to household incomes were similar (see Table 8.6).

Decision-making by urban farmers

Like in many other urban farming contexts, men and women in Langas played varying decision-making roles in urban agriculture. The roles were mediated by a multiplicity of factors, and achieved varying outcomes for the farming households and for individuals as well. This is the focus of the present chapter. But first, I shed some light on men's and women's relative decision-making power and roles within the household more generally.

Decision-making at the household level

Many respondents – men and women alike – seemed to uphold the cultural norm that designates men as the main decision-makers for their households. While this role is a natural derivative of the role of breadwinner, Chapter 4 and 6 demonstrated how men's role as breadwinners for their households had become tenuous owing to changing economic circumstances that increasingly pushed women in the vanguard of household provisioning. It is no wonder therefore that men's decision-making power would become tenuous as well. As one woman noted:

Some men want to be the ones to make all decisions just because they are men but they are unable to provide for their families. Life has become so difficult and lately the men are not getting jobs to do out there. Most of them are just keeping indoors because they have nothing to do leaving their wives to fend for their families. So women have also been forced to work hard. If you wait for your husband to decide for you about what to do your family will go hungry. And when they (men) cannot find money to buy food for the families they become even harsh and demand food from their wives even when they have not provided.

(Mama Sella, 30 May 2009)

Indeed, it was readily evident that not only did the women wish to be involved more in decision-making at the household level, but that many of them actually wielded considerable leverage in household decisions and that there was also a growing recognition among men of the value of such involvement to household sustenance. Nonetheless, whether their wives contributed the most to household

livelihoods, men would still insist on being final authorities regarding decision-making in the household. One of many testimonies, Njoroge's was illustrative of this. Njoroge was responsible for all farming activities on his plot. He kept pigs (his main source of income) and chickens, and grew a variety of crops on his plot mainly for household consumption. His wife, on the other hand, operated a second-hand clothes business in one of Eldoret's designated markets where she owned a stall. Njoroge conceded that his wife's business was the main source of income not only for the household, but also for inputs for his farming activities. As to his decision-making power in the household relative to his wife's, he commented as follows:

We consult on many issues such as payment of school fees, developments on the plot, how to get money for pig feeds, how the second-hand clothes business is going on, etc. Even when I want to sell pigs, I consult her then we know what to do with the income. But I am the final authority in my household. My wife knows that. I can even decide that she closes the second-hand clothes business.

(Njoroge, 23 May 2009)

Notwithstanding their apprehension about men's continued claims on their socially constructed roles as the main decision-makers, many women did not explicitly or actively challenge this position. Rather, they seemed content to bargain for greater involvement in decision-making within the confines of their social spaces – which they exploited to demonstrate their capabilities in making decisions – and through persuasion and subtle contestation. However, there were a few cases where women were more assertive and actively contested their husbands' monopoly in decision-making. Even then, there seemed to be clearly delineated boundaries as to what kind of decisions women could execute on their own and the ones that were reserved for the men. Generally, women were the main decision-makers on issues related to home-keeping, child care, and day-to-day running of the household, including dietary issues and purchase of minor household items. On the other hand, decisions related with education of children, housing, household investments and acquisition of fixed assets were a preserve of men that even the most independent and assertive of women could not undertake without involving their husbands.

Consistent with studies from other African contexts (see e.g. Angel-Urdinola & Wodon 2010),¹ various accounts indicated that women who had their own sources of income and/or made significant contributions to household livelihoods were more likely than not to play a more significant role in decision-making. It was apparent too that whereas women's increased contribution to household livelihoods was welcomed by men, the autonomy and decision-making power that

¹ From their economic analysis of intra-household decision-making in Nigeria, Angel-Urdinola & Wodon (2010: 397) concluded that "when they are the main contributor of income, women win substantial decision-making power".

attended such contributions were, in certain instances, masculinity-threatening. This was especially the case with men who faced uncertain prospects in their own economic circumstances. For instance, it was noted in Chapter 6 how, while supportive of his wife's financial success that had assured household livelihood resilience following his loss of employment, Baba Daddy was increasingly worried about losing his voice in the household, leading him into exploring strategies to improve his own financial circumstances in order to regain the voice. Mhubiri captured men's anxieties over their authority and claims to decision-making power inherent in their inability to provide for their families as follows:

Nowadays, men are forced to allow their wives to engage in business (...) This is the only way for the households to survive economic times like the ones we are experiencing today (...) Unfortunately, when women start generating and handling money, it brings problems and disharmony in the family. Women become disrespectful of their husbands when they start getting money of their own. Some marriages have even broken as a result. In the past when women stayed at home, there was a lot of order and harmony in the way family affairs were run.

(Mhubiri, 30 May 2009)

In contrast, men who were household breadwinners, in fact, tended to cede only limited decision-making power to their wives beyond the latter's socially constructed spaces. While the women in such circumstances were constrained to consult their husbands in most cases before doing anything whenever men's support was required, the men did not usually deem it necessary to seek the opinion of their wives on most issues. But as the excerpts below imply, women's limited decision-making power was not predicated on their weak economic status alone. It was also predicated on their supposed limited capabilities, and augmented by their lack of agency as well as their acceptance of, or resignation to, social constructs of men as main decision makers.

I make most decisions in this house. I rarely consult my wife because I have no time for that. I normally think through my decisions well and so I do not have to consult her. My wife cannot question the decisions I make.

(Mudavadi, 1 July 2009)

I am the main decision-maker. I just inform my wife what I am planning to do. I do not consult her except on issues to do with the household. If you told women about what you want to do, they would block developments because they do not focus far. If they know you have money, they want you to buy them clothes and household items... She (the wife) does not even know where my school is. Even the plot I bought recently, she just came to know about it during the transaction.

(Ongeri, 7 June 2009)

As the man of the household, I am its head so I make all important decisions. But my wife also has her space. She makes all decisions regarding how she runs the kitchen.

(Lang'at, 3 August 2009)

A woman's level of education and exposure was an important factor in decision-making. As Chebet's case demonstrates, the more educated and exposed a

woman was the more likely she would be involved in making decisions at the household level. A university-educated woman and a former senior civil servant of many years' experience, Chebet made most of the decisions about her 'profitable' dairy farming enterprise. As she put it: "How would I allow anyone to intimidate me with my level of education, exposure and work experience? How can I be unable to make decisions at the household level? My husband rarely goes against my decisions because I always think them through thoroughly. He respects that." However, whereas she makes many decisions without informing her husband, Chebet admitted that there were other decisions that she consulted him while others could only be taken with his participation:

If he would be around, he would be making some decisions. But when I make decisions, I inform him about it (...) Communication has also been made easier such that if I really must consult him then I just talk to him on phone and we agree. If the fence goes down or the house starts to leak, I will just look for somebody and pay him to fix the problem. I do not have to consult him on such things. Or if a labourer decides to quit his job, I will simply replace him with someone else after which I just inform my husband about the decision. However, when it comes to household development and investments, we normally sit together and agree on what we want to do. Then each of us will make their contributions individually. We do not necessarily put our incomes on the table. We individually plan for small things.

(Chebet, 23 May 2009)

A woman's stage in life course was another important factor. Older women (e.g. Mama Daddy and Chebet) participated in decision-making with greater autonomy than younger women. This may relate to accumulated experience in making or participating in making decisions that might have given them the confidence to make decisions and/or earned their husbands' confidence in their (women's) ability to make decisions. Another possible explanation is that as women grow older and their children mature, they somehow overcome some gender-based cultural sanctions and demeaning cultural practices such as wife battering and therefore feel a greater sense of autonomy and agency to do things the best way they know how. As Sonkoro lamented:

The fact that my wife is the one who generates most of the household income has not affected our household relations (...) But you know when women become older, they become more independent. In the past, my wife would consult me on almost everything. But nowadays she makes many decisions on her own except those involving major issues where we consult. For instance, last week she just sent somebody to tell me that she had gone to our rural home and that she would be there for one month. In the past, she could not do such a thing without telling me. I cannot do anything because I know that she knows what she is doing and she has gone to look after our property in the rural home anyway. Besides, we do not have a small child in the house that would require her care.

(Sonkoro, 22 May 2009)

While older men like Sonkoro (57 years) may have sometimes begrudgingly given in to their wives' increasing independence, remarks by Onyancha (31) and Makori (35) below may imply that younger men were more inclined to willingly

involve their wives in decision-making. They tended to do so partly to placate women for instrumental reasons – that is, as a means of accessing women’s resources, and extracting women’s acquiescence and support in implementing their (men’s) decisions. Such gestures also seemed to have been informed by increasing levels of gender awareness:

I make decisions together with my wife (...) If I decide alone, my wife will feel bad and think that I do not recognize and appreciate her and that I look down upon her because she is a woman. Besides, sometimes I realize that whatever I am planning to do will require her participation to make it successful (...) I also get involved in her plans to try to help her succeed so that she does not blame me if she fails. When I have money, mostly my wife is the one who suggests what we should do with it (...) My wife has good development ideas.

(Onyancha, 23 May 2009)

I am the main decision-maker, although I try to encourage my wife to contribute towards making decisions but she always leaves many decisions to me. She fears failure so she would rather I make the decisions because she believes I understand most of the things I plan to do. But sometimes when I am not there or I am sick she makes decisions. Like now she is in our rural home where she has been for now one week doing everything related to our farm. I do not mind her making decisions or doing anything but she prefers to ask me for my opinion most of the time.

(Makori, 30 May 2009)

Dennery’s (1996) study among urban farmers in Nairobi suggests that consultations for instrumental purposes work both ways. That is, women may also consult men just to play it safe in an apparent show of their deference to the latter’s authority, and as a strategy of enlisting men’s support for their decisions.

Decision-making in female-headed households was less nuanced. Single women were invariably the main decision-makers for their households, largely because, as one of them put it, “after all there is no one else to consult”.² It is noteworthy that autonomy in decision-making among widows was also high even if there were grown-up sons and other adult males in their households. For instance, although Mama Shiko, a widow since 1990, stayed with her son who was a teacher in a local primary school, she made most of the decisions on the plot. The son described his role as follows: “I only assist her once in a while when she asks me to. Otherwise she plans most of the things by herself.”³ Women with spouses who were regularly absent from the household for reasons of working far away in another town were also more likely, out of necessity, to take responsibility for the day-to-day running of their households (e.g. Chebet, above) – hence the characterization of such households as female-managed households (Mutoro 1995; van Vuuren 2003). However, as we have already noted, some decisions were made through consultation over phone while others had to await their husbands.

² Redempta, interviewed on 26 May 2009.

³ Kimani, interviewed on 2 June 2009.

The foregoing discussion lends credence to the conceptualisation of household decision-making as some form of bargaining. According to this conceptualisation, an individual's bargaining power in the household depends on the strength of the individual's fall-back position, being the individual's personal situation and endowments that determine how well-off he/she may be were the co-operative arrangements within the household to fail (Agarwal 1997). It follows that "An improvement in the person's fall-back position (...) would lead to an improvement in the deal the person gets within the household" (*ibid.*: 4). In this particular case, women's bargaining power improved with their level of education, economic independence, and age.

Decision-making in urban agriculture

The analysis in this section focuses on men's and women's relative roles in the initial decision to farm, the choice of crops and livestock, and in the use of inputs, agricultural produce and income.

Crop cultivation

- The decision to farm

Consistent with the general perception that subsistence home gardening is dominated by women, it appeared to be the case that in most instances it was a woman's idea that the household undertakes farming. However, as was demonstrated in Chapter 6, men were increasingly turning to urban agriculture and taking the initiative to farm as well. In the most part this was in response to men's deteriorating economic circumstances occasioned by loss of or dwindling non-farming income sources. There were also many cases where men who had initially opposed their wives' decision to farm or were indifferent about it ended up embracing the activity and supporting their wives:

Since I do not have a full-time job, I decided to involve myself with farming to enable me support my family. I get food from the plot and I am also able to pay school fees for my children.

(Langat, 3 May 2009)

Keeping chickens was my wife's idea. One day she told me that it was important that we try to keep chickens. Although I initially didn't think they would be very helpful, I agreed with her and even helped her in taking care of them. (...) I later came to realize that they are very important. Unfortunately, we lost our chickens during the post-election violence. After getting some money recently, I decided that we start keeping chickens again.

(Makori, 30 May 2009)

The case was also mentioned of Baba Daddy (see Chapter 6) who, shortly after losing his job, was initially 'disappointed' by his wife's decision to cultivate crops on his plot on account that farming was demeaning to his status and that the plot would better serve as a car parking lot. However, Baba Daddy would

eventually sell his car when his economic circumstances worsened and come to appreciate the benefits of urban farming to the sustenance of his household. He subsequently took more interest in and ‘fully’ supported his wife’s farming activities.

Access to and control over farming resources was another important factor in men’s and women’s involvement in the initial decision to farm. As the primary resource in urban farming, one’s control over land is a particularly important leverage in decision-making regarding whether or not the land should be used for farming, and which activities to undertake. Since men controlled most of the plots accessed by the farming households (see Chapter 7), it would therefore be expected that most farming activities were undertaken on men’s initiatives or only with their consent – explicit or tacit. Women secured the consent to farm household plots through different forms of intra-household negotiation and bargaining.

The comments below further substantiate the role of a household’s economic status and access to farming resources in mediating men’s and women’s initial decisions to commit their households to urban farming. They also suggest various other factors such as differences in farming knowledge and personal agency:

Before we started cultivating this plot, it was lying idle. At home my parents were farmers. I grew up helping them and I liked it. So when I saw this idle land, I cleared it, and then grew crops on it. I do everything related to farming. I decide what to plant. I weed, spray and harvest. I even go as far as buying the seedlings and my husband is okay with it. He does not mind what I plant. (...) My husband is a driver. He usually comes home in the evening so he finds when I have done everything. We do not depend on this plot for everything because my husband pays school fees but we buy household commodities like cooking fat and salt using the money we get from selling vegetables. He takes care of school fees while I ensure my family has something to eat.

(Anyango, 17 August 2009)

When I was growing up, my parents were not practicing any farming. And since I only managed to go to school up to class four, I never had a chance to learn agriculture in school either. But when I got married, and we got this plot, my husband decided that we farm the plot to supplement our income. I had no choice but to learn by doing.

(Waithera, 3 May 2009)

• Choice of crops

It is apparent from the data presented in Table 9.1 (see also Appendix 9.1) that, taking together decision-making instances involving all crops (N=419), female spouses were more likely than their male counterparts to have chosen crops for cultivation. The data further revealed significant differences between men and women in their preferences for and decision making roles in respect of different types of crops. Women played a more dominant role in the choice of food crops⁴,

⁴ It should be noted that although these crops are categorized here as food crops, they also, to varying degrees, generated income for some households. However, they were primarily cultivated for home

while men showed greater preference for income-earning crops. Compared to other food crops, however, men's role in decisions about maize cultivation was not only more enhanced, but also comparable to women's.

Table 9.1 Decision-making on the choice of crops, by gender of respondent (%)

	N	Men	Women	Joint
All crops ⁵	419	22	50	26
Food crops (incl. maize)	314	21	49	28
Maize	91	30	34	36
Income-earning crops	37	38	27	35

Note: Some percentages do not add up to 100% because household members other than the male household head and/or the female spouse also took decisions on the choice of crop.

Chi-square: $X^2=13.37$; $df=4$, $p=0.01<0.05$.

Men's keener interest in maize is not entirely surprising given their responsibility for household provisioning, and seen against the backdrop of difficult economic circumstances. It is instructive that in local parlance, looking for work to earn an income goes by the Kiswahili expression *kutafuta unga*, which literally translates to 'looking for maize flour'. Thus, men's diminished ability to earn adequate and reliable income from non-farming activities to support their families led many of them into taking the decision to cultivate maize. There were many instances whereby men showed more interest in maize cultivation than their wives. Because of women's responsibility for household vegetable needs, they generally preferred to grow vegetables. Besides, vegetables also generated some income that enabled them to purchase other essential household items as well as to meet their personal needs. The following comments are illustrative:

My husband had wanted us to grow maize on the whole plot but I did not agree with the idea. I suggested that we spare a small portion for vegetables because as a woman I know the importance of growing vegetables. I need vegetables in my house every day. If I don't grow my own then I have to buy every day. Where do I get the money from?

(Mama Ben, 8 June 2009)

When I started farming I used to plant maize on the whole plot. I later decided to try different vegetables. My husband was reluctant at first. He did not agree with my plans to abandon maize. But I know how to handle him. I planted the vegetables when he was away (...) It is now seven years and I have never gone back to maize since. Each day I sell *sukuma wiki* worth at least Kshs. 100. I use part of it in the house and save the rest with my social groups (...). The reason why I stopped planting maize is that you only harvest once and the produce

consumption. Similarly, the crops categorized as income-earning crops (i.e. *suja*, green pepper and *dhanja*) – and which are omitted from the group of food crops – were for all intents and purposes food crops, except that the overriding motive for their cultivation was income-generation.

⁵ Although included here, 'other crops' (i.e. tree crops and/or non-essential crops), which were cultivated in a total of 68 instances, are excluded from subsequent analysis.

only lasts the family just a few months. But *sukuma wiki* takes only three months to mature and after that you harvest for a long time.

(Mama Daddy, 9 August 2009)

The preferences for different crops were also based on men's and women's relative levels of knowledge about crops. As was demonstrated in Chapter 7, these too were related to gender roles and responsibilities, and relative spatial mobility. Amanda⁶ noted that she decided which traditional vegetables to grow because her husband did not know much about the vegetables and that he did not even know how seeds of some vegetables looked like. But she also confessed her own limited knowledge about strawberries, which her husband had grown on the plot, and which she had never seen hitherto. Amanda's husband, Waswa,⁷ first learnt about strawberries from a farmer who supplied a local supermarket he worked for. Upon realizing that "one could earn so much money from a small packet of strawberries", Waswa sought to know from the farmer about what goes into producing the fruits. His request to visit the farmer for advice was granted. After his visit to the farmer's garden, Waswa concluded that "it was not a big deal to cultivate strawberries" and decided to also cultivate the crop as a means of diversifying his income sources.

The income motive and the need to enrich household diet were particularly important factors in men's dominant role in the choice of *suja*, *dhania* and green pepper. There was also evidence to suggest that although women's control over decisions related to *sukuma wiki* may be predicated on their gender roles and responsibilities, it also in a way reflected the fact that the typical *sukuma wiki* garden was only a few square feet and generally considered by men as being too small to generate any meaningful income, if at all. It seemed that where men's economic circumstances were unstable and the crop's economic value more obvious, men tended to make decisions in favour of *sukuma wiki* cultivation. For some men, like Siberi, cultivation of *sukuma wiki* came to be seen as the most important source of household livelihood:

The most important crop on this plot is *sukuma wiki*, which we use and sell to cater for family needs. The demand for *sukuma wiki* is high compared to *saga* and *suja*. Besides, *sukuma wiki* also withstands both the rainy and dry seasons (...) We cannot manage without this farm because the money I earn is not enough to pay school fees and cater for other needs. We rely on this farm for our daily food requirements (...). I decide what to plant, buy seedlings then leave the rest of the work for my wife.

(Siberi, 21 July 2009)

The role of income-earning value of crops and household economic circumstances as factors in gendered meanings of crops and home gardens was also captured by Gitau's circumstances (see also Chapter 6). With his off-farm welding

⁶ Interviewed on 26 July 2009.

⁷ Interviewed on 1 August 2009.

and fabrication business not doing well enough to enable him support his family, Gitau decided to focus a lot more attention on urban farming as a major source of livelihood for his family. He made most of the decisions on the plot, including which crops to cultivate:

I decide what to plant on my plot but I allow my wife to grow some vegetables so that she can sell and get money to cater for kitchen needs (...) Since I am the breadwinner in this family, I ensure that I make the right decisions concerning what to grow to avoid losses. I decide what to plant, provide the seedlings and then my wife plants and weeds the plot.

(Gitau, 22 August 2009)

Aside from underscoring the gendered interests in crop cultivation, comments by Mama Daddy, Mama Ben and Gitau above also offer glimpses into the role of power relations in household decision-making, and how women used their social spaces to negotiate and contest men's power in pursuit of household and/or personal interests.

- Use of crop products

Table 9.2 reinforces the notion that urban residents take up urban agriculture primarily to improve household food security (compare the data in the second and sixth columns). The data on all categories of crops show that crop cultivating households were more likely to consume than to sell their produce (see also Appendix 9.2). Maize, one of two widely cultivated crops – the other being *sukuma wiki* – was sold in only 7% (N=95) of maize-growing households and consumed in 95% of the households. As has already been mentioned, this relates to the fact that the vast majority of home gardens were too small to produce any surplus maize grains for sale, and in most instances, the produce realized could last the households only a few months.

More generally, it appears that women had a greater say than men about the consumption of crop produce, and that women's and men's relative roles did not vary significantly between the different crop types (see Table 9.2). Except for

Table 9.2 Decision-making on consumption and sale of crop products, by gender (%)

	N	Consumption			N	Sales		
		Men	Women	Joint		Men	Women	Joint
All crops	373	15	60	23	170	22	46	29
Food crops (incl. maize)	285	15	59	24	130	18	49	29
Maize	90	20	42	38	7	14	43	43
Income/diet	32	19	56	25	25	40	32	28

Note: Some percentages do not add up to 100% because household members other than the male household head and/or the female spouse also took decisions about consumption and/or sale of crop products.

Chi-square: $X^2=11.724$; $df=6$, $p=0.068>0.05$.

crops cultivated primarily for income, women again played a bigger role than men in deciding the sale of crop produce. Considering decision-making patterns regarding choice of crops, it would appear that men and women exercised more control over the use of produce from the crops that were chosen by them.

Women's dominant role in decisions about the sale of crop produce, as in the case of consumption, can be attributed to their gender identities and roles, and their equally dominant role in taking responsibility for the crops (see Chapter 10). It also helped that *sukuma wiki* – the most widely sold crop (accounting for 42% of all instances, N=170) – was generally considered by men as a woman's crop grown primarily for home consumption. For this reason, many men may not have had a say regarding the sale of *sukuma wiki* either because of social norms, or because they were simply not aware that any sales worth their interest would be made of the vegetable in the first place. This was both unintentional and strategic on the part of many women. Because men spent most of the time outside their homes, they may not have been available for consultation by their spouses whenever need arose to sell part of their produce. On the other hand, the financial pressures accompanying women's home-keeping and reproductive roles could have led women into taking the decisions unilaterally in order to meet urgent household needs. Indeed, in certain instances, women might have taken the decision to sell part of farm produce with the knowledge that their husbands would not approve of such actions. It was especially common for women to deliberately conceal the income-earning value of the crops from their spouses thereby effectively excluding them from any decision-making role in that respect. This strategy was adopted by women to enhance their own incomes to be able to attend to personal obligations, but also in order to bolster household 'strategic income reserve' that would come in handy in the event that their spouses' incomes declined or dried up (see Chapter 10).

Women's relatively greater control over the sale of crop produce might also be attributed to their responsibility for food preparation. As explained by female farmers in a different Kenyan urban context (Dennery 1996), women's responsibility for preparing food puts them in a vantage position to know how much produce is required for household consumption and the surplus, if any, that could be sold. This may also explain why women's role in decisions about crops that were cultivated primarily for income and dietary diversification was only slightly lower than men's (see Table 9.2). As with the performance of certain tasks, men's involvement with decisions related to certain crops was, in some cases, also dictated by cultural sanctions and social construction of masculine (public) and feminine (domestic) spaces.

Besides consumption and sale, some crop products were put to other uses as well. Maize stalks were re-used on plots as mulch, and as animal feed and cook-

ing fuel. Maize cobs were also used as cooking fuel. Women made most of the decisions about these uses. They made the decisions in three-quarters of the instances where maize stalks were re-used on plots, and in 85% and 58%, respectively, where they were used as animal feed and fuel (N=19, in both cases). Regarding decisions about the use of maize cobs as fuel, women's role was similarly high (86%, N=37).

Some crop-cultivating households also gave away part of their produce to other people. While such gestures were rare – they were reported in only 14 cases – they constituted an integral part of social capital formation (see Chapter 8), and women were the main decision-makers as they singularly made the decision in ten of the cases and jointly with their husbands in the rest. As would be expected, the inclination to share agricultural produce with others is contingent upon social relations and availability of surplus.

- Use of income from crop cultivation

The level of control over the use of income from gardening varied between men and women depending on the type of crops involved (Table 9.3). Women were the sole decision-makers in the majority of instances involving food crops – and indeed all crops considered together – but had an equal say as men where income-generating crops were concerned (see also Appendix 9.3).

Table 9.3 Decision-making on use of income from crop products (%)

	N	Men	Women	Joint
All crops ⁸	170	13	58	28
Food crops (incl. maize)	130	9	64	27
Income-earning crops	25	32	32	36
Others	15	13	60	27

Note: Some percentages do not add up to 100% because household members other than the male household head and/or the female spouse also took decisions about consumption and/or sale of crop products.

Chi-square: $X^2=12.454$, $df=4$, $p=0.014<0.05$.

Women's control over use of income from gardening could be attributed to their similarly dominant role in deciding the sale of produce. The reasons advanced for the latter in the preceding section are equally valid in this particular case, viz. men's regular absence from the home and, more so, women's tendency to conceal income from their husbands. Yet in many other cases where men con-

⁸ Although included here, 'other crops' (i.e. tree crops and/or non-essential crops), which were cultivated in a total of 68 instances, are excluded from subsequent analysis.

sidered crop cultivation as an important source of household income and means of safeguarding their own personal incomes, they tended to cede decision-making power regarding use of income. Often this was accompanied with the rider and/or expectation that, in exchange, the women would not receive routine budgetary support for household upkeep. In other words, women were expected to trade-off their social claims on men's personal incomes for freedom to make decisions about how to use income generated from their gardens.

I sell vegetables to buy essential household items because that is my responsibility. The vegetables earn me up to Kshs. 50 per day and I use the money to buy what I lack in the house. My husband never asks me for the money after selling vegetables so long as I do not ask him for the house budget.

(Muhonja, 2 June 2009)

I decide what to grow, my wife weeds and then I spray and she sells the vegetables. I never ask how much she gets from the sales. I usually tell her to use whatever money she gets to buy what she needs in her kitchen.

(Mudavadi, 1 July 2009)

It could be argued that ceding control over use of income may also have been borne out of men's realization of the futility of monitoring such incomes, and suspicions that their spouses would conceal such incomes anyway. As one man commented:

My wife can sell chickens and ducks without telling me. I normally don't ask. (...) When she sells vegetables, she does not tell you everything. If you have a dairy cow, you will not be there all the day to see how much milk it produces.

(Mhubiri, 30 May 2009)

For some women, such arrangements tended to enhance their ability to play their reproductive roles, exercise some autonomy, and build social capital as a means of accessing financial credit with which to enter the non-farm informal sector (see Chapter 8). Of course this would be more probable where agricultural productivity is high. But where productivity is low relative to household and personal needs, such arrangements would increase women's burdens of supporting their families.

• Decision-making on inputs

The respondents were also asked about which household members made decisions on the use of different inputs. It turned out that decision-making power varied between spouses depending on the type of input involved and the source location for the input (see Table 9.4). Men had a bigger say where chemical and/or market-purchased inputs were involved, while decisions about the use of organic and/or locally available (and especially home-based) inputs were mostly taken by women.

It should be noted that besides requiring access to the market, the agricultural inputs associated with men also required access to financial resources and a cer-

Table 9.4 Decision-making on use of inputs for crop cultivation, by gender (%)

Input	No. of resp. using (=N)	Men	Women	Joint
<i>Market purchased inputs</i>				
Chemical fertilizer	79	42	22	37
Pesticides	76	47	28	21
Insecticides	29	34	28	38
Improved seeds	83	28	28	41
Sub-total	267	38	26	34
<i>Organic/local inputs</i>				
Manure	87	23	60	15
Crop residue	53	19	53	26
Local seeds	49	31	49	20
Sub-total	189	24	55	20
Total	488	33	37	28

Note: Some percentages do not add up to 100% either because of rounding, or because household members other than the male household head and/or the female spouse also took decisions on the use of inputs.

tain level of modern agricultural knowledge and information. Men fared better than women in all these respects.

Livestock keeping

- Choice of livestock

Table 9.5 suggests that the decision to keep large livestock was mostly taken by men while women made the choice in a majority of cases involving small livestock. As was apparent in Chapter 8, men in Langas were the declared owners of large livestock – even where such livestock were purchased by women or with women's contribution. Given the monetized nature of the urban setting, large livestock (in particular) constituted an important form of liquid assets that could easily be converted into cash income whenever need beckoned.

The keeping of large livestock, especially dairy cows and pigs, required considerable financial investment, technical knowledge about animal husbandry, and high labour input. Access to and control over these resources was therefore an important factor in leveraging decision-making regarding whether or not to keep the livestock. Thus, women's decision-making power with respect to large livestock was limited by their weak financial positions and limited agricultural knowledge and information.

As Wandera's comments below indicate, women with access to financial resources wielded considerable influence on decisions relating to the keeping of large livestock. The labour demands and subsistence value of certain livestock,

Table 9.5 Decision-making on choice of livestock, by gender (%)

	N	Men	Women	Joint
<i>Large livestock</i>				
Cows	36	47	14	39
Sheep	42	52	17	24
Goats	9	44	22	22
Pigs	14	57	7	29
Sub-total	101	50	15	30
<i>Small livestock</i>				
Chickens	57	19	56	25
Ducks	21	33	33	29
Sub-total	78	23	50	26
Total	179	39	30	28

Note: Some percentages do not add up to 100% because household members other than the male household head and/or the female spouse also took decisions on the choice of livestock.

especially dairy cows, also necessitated consultations between spouses in many cases. Some form of concurrence about the need to rear livestock and how to share responsibility was deemed critical for the success of livestock-keeping projects:

I was encouraged (to keep cows) by a workmate who kept cows in Yamumbi estate. He told me how he benefited from the cows in terms of getting milk for the family and earning some income by selling milk. I visited him and saw for myself how well his animals were doing. I then took my wife there so she could also see for herself. When we came back we discussed and agreed that keeping dairy cows was a good idea. My wife then raised most of the money needed to buy the first cow. She got the money through a women's merry-go-round group. I added my contribution and we bought the cow. If you want to be a good farmer, you must involve your wife in the decisions you make. For instance, when we started keeping cows in 1993, I was still working at Rivatex. Were it not for my wife, we couldn't have even bought the cows in the first place, let alone taking care of them.

(Wandera, 30 May 2009)

- Use of livestock inputs

It can be inferred from Table 9.6 that men made most of the decisions about input use in livestock-keeping households. They took the decision in two-thirds of all the 175 instances where different livestock inputs were used; women did so in one-tenth of the instances, and both spouses consulted in one in every four instances. Considering the type of inputs involved, the role of men and women in decision-making can, as in the case of crop cultivation, be similarly explained in terms of gender differences in knowledge and information, spatial mobility, and financial endowments. Women's limited role in decisions related to use of inputs

Table 9.6 Decision-making on use of inputs for livestock keeping, by gender (%)

Input	No. of instances (=N)	Men	Women	Joint
Improved breed	9	67	22	11
Veterinary drugs	62	87	6	3
Feed supplements	51	67	8	10
Urban waste	25	40	16	40
Crop residue	24	42	29	29
Ethno-vet. Medicine	4	100	0	0
Total	175	67	12	14

may also be attributed to the fact that the livestock they were involved with – i.e. small livestock – were mostly of the traditional free-ranging type that required little input sourcing.

- Use of animal products and income

Differences were noted between men and women in their respective responsibilities for the decisions as to whether livestock products should be consumed and/or sold (see Table 9.7; also Appendix 9.4). Considered in terms of large and small livestock, it turns out that most decisions about committing small livestock products for both home consumption and sale were taken by women.

Table 9.7 Decision-making on the use of animal products, by gender (%)

	Consumption*				Sales**			
	N	Men	Women	Joint	N	Men	Women	Joint
All animals	168	18	42	40	111	30	32	37
Large livestock	56	21	27	52	64	45	13	41
Small livestock	112	17	49	34	47	9	60	32

Note: Some percentages do not add up to 100% because household members other than the male household head and/or the female spouse also took decisions about consumption and/or sale of livestock products.

Chi-square: * $X^2=7.853$, $df=2$, $p=0.02<0.05$; ** $X^2=31.337$, $df=2$, $p=0.00<0.05$.

In the case of large livestock, women's say was only marginally higher than men's in consumption-related decisions, but men controlled the sale of animal products in the majority of cases. An important point to make here is that most of the sales related to large livestock involved live animals. Pigs and sheep were the most commonly sold animals. In this respect – as in the case of small livestock too – culture, social norms, intra-household power relations, market information,

and control over the livestock were important influences on decision-making patterns relating to livestock sales. I illustrate this point using the cases below.

My husband owns everything on this plot so in case he wants to sell any of the livestock, he never consults me and I never ask for the money. What I know is that he uses some of the money to pay school fees and pockets the rest. The only things I am allowed to sell are the vegetables, milk and eggs (...) My work is to milk the cows and I decide how we use the milk. We use part of it in the house and sell the rest. My husband never asks for the money but he expects me to use the income I receive from the milk to buy other food items and basic household requirements. He does not ask for the money. He only wants to see that there is food and that I do not ask him for any money as long as I am selling milk.

(Kerubo, 6 June 2009)

I used to have eight cows, seven dairy cows and a bull but because of school fees I sold all of them in 2002. (...) The cows belonged to me. I am the one who bought them (...) I used to get an average of Kshs. 8,000 per month from milk sales. I used to take the money myself from the buyers at the end of the month. I would then decide on how much to give my wife for household use.

(Lusuli, 20 July 2009)

When I want to sell pigs I do not consult my wife as doing so brings about quarrels, especially when she gets to know the selling price. I usually do not want to give her any money after paying school fees.

(Obachi, 6 June 2009)

Since he (the husband) is the one who struggles with the cow everyday when he milks the cow we usually wait for him to decide how much milk to leave for us and how much to sell. He has some regular customers who take milk everyday and pay at the end of the month. He gives such customers priority and he does not want them to miss out. He normally puts aside milk for his customers before he gives us whatever remains.

(Muhonja, 2 June 2009)

The comments above suggest that men and women were less inclined to consult their spouses about the sale of livestock if they considered the livestock as personal property over which they had full control. Obachi's statement also indicates that while rooted in traditional gender relations, men's unilateral decisions to sale livestock were also an important strategy of excluding their spouses from sharing in the income accruing to the sale of the livestock. Whether or not men and women were involved in decision-making about sale of animal products or ceded decision-making power to their spouses also depended on their labour contributions.

But as Table 9.5 shows, the level of consultation between spouses in the contexts of the two uses (i.e. consumption and sales) for livestock products was both high and comparable. It must be noted that the proportion of mutual decisions was particularly high where large livestock were involved. This owes not only to the fact that large livestock were an important form of household liquid assets, but also that the keeping of large livestock was a labour-intensive venture requiring, in some instances, division of labour and roles between men and women. As a result of this, labour contribution became an important basis – on the part of

women in particular – for being involved in decisions relating to the sale of the livestock (see Chapter 10). Consultations between men and women were especially common in the case of dairy cows; the additional reason being that cow milk was an important part of household nutrition and source of regular income. Thus, regardless of whose initiative it was to keep it, a dairy cow was considered more of a household asset than a personal asset and therefore disposing of it was more often than not a consensual decision between spouses. In the ten instances where cows were sold, men and women jointly decided in seven of the cases.

Mama Sella's account referred to earlier in Chapter 8 also points to the influence of social norms and intra-household power relations on men's and women's control over the sale of live animals. Traditional patterns of livestock ownership and responsibility-sharing necessitated that women who owned sheep and pigs consult their husbands whenever they wished to sell the animals. This was also reinforced by women's relatively limited access to market information.

Besides using livestock products for consumption and sale, livestock keepers also shared some livestock products with friends and neighbours, although this occurred on a limited scale. Such products included animal manure and bird droppings (N=11), but also live birds (N=5). In this respect, women were the main decision-makers, having taken decisions to give away the products in two-thirds of the cases. Women may have been obliged to give away the products partly as a reciprocal gesture inherent in social relations and, in the case of manure, because it relieved them of the burden of disposing of the waste. In either case, giving away such products was an integral part of social capital formation among livestock keeping households.

Gendered division of labour in urban agriculture

This chapter highlights the labour contributions of men and women in urban agriculture, the gender relations that underpin these patterns, and the implications of the labour distribution patterns for household and individual livelihood outcomes. The allocation of labour within urban agriculture in Eldoret is considered at two levels. Firstly, the analysis focuses on the sharing of overall responsibility for crops and livestock. Since it was common for different household members to assume responsibility for different crops and livestock, for purposes of analysis, gardening and livestock enterprises were disaggregated into the different crops and livestock types. Each crop grown and each livestock type reared at the household level was considered as constituting a separate instance for responsibility taking.¹ However, taking responsibility for a particular crop or livestock did not necessarily mean that the individual involved performed all tasks in respect of the crop or livestock. Rather, tasks were commonly shared with or even performed by other household members. In other instances external labour was hired. Thus, the second level of analysis focuses on the performance of specific tasks in crop production and livestock keeping.

Division of responsibility for crops

Table 10.1 and Appendix 10.1 present data on responsibility-sharing between men and women in crop cultivation. The data show that responsibility for crops was shared by men and women in only 9% of the 419 instances. In 85% of the instances, crops were the sole responsibility of only one spouse, and it was three

¹ In other words, a household cultivating three types of crops would be considered as presenting three responsibility-taking instances, and one with two types of livestock considered as presenting two responsibility-taking instances.

times more likely that the spouse involved was female. These gender differences were replicated in the case of subsistence crops, as well as maize (the staple crop) when considered separately. However, men's level of involvement with income-earning crops was higher and although women still dominated this category of crops, they did so to a lesser extent compared with subsistence crops.

Table 10.1 Responsibility for crops, by gender (%)

Type of crop	N	Male head	Female spouse	Joint
All crops	419	21	64	9
Subsistence crops (incl. maize)	314	19	65	10
Maize	91	24	60	10
Income-generating crops	37	30	51	16

Note: The percentages do not add up to 100% because household members other than the male household heads or the female spouse also took responsibility for crops in certain instances (see Appendix 10.1).

The patterns of gender division of responsibility were underpinned by various factors, which motivated men's and women's participation in crop cultivation to significantly different levels (see Table 10.2). Men and women mostly assumed responsibility for particular crops because they 'had time' or because the cultivation of the crop was their 'own initiative/investment'. While in the latter case both male and female spouses were motivated to more or less the same extent, the time factor was more important in explaining women's than men's role in taking responsibility for crops. Considering the time demands of women's domestic responsibilities and the fact that many women also participated in other income-generating activities,² it would perhaps be more accurate to think about the importance of the time factor for women not in terms of *availability per se* but rather in terms of *flexibility* and their supposed ability to juggle between domestic roles and gardening.

It has already been noted that women were more inclined towards taking responsibility for subsistence crops, presumably because preparation of food was part of their reproductive roles. This can be inferred from 15% of the instances where women's responsibility for crops either was part of the cultural expectation of them (8%), doing so benefited them the most (7%), or it was related to

² 52% (N=119) of the female spouses were involved in non-farming livelihood activities, most of which were either home-based or carried out within the neighbourhood in close proximity of the home (see Chapter 6).

Table 10.2 Reasons for taking responsibility for crops, by gender (%)

	Men	Women
<i>No. of instances:</i>	87	270
Own initiative/investment	28	22
Culture/tradition	7	8
Has technical knowledge	23	0
It is just a small project	5	13
It benefits me the most	7	4
Have time	29	48
Relates to other responsibilities	2	3
Cannot afford hired labour	0	2
Spouse's decision	0	1
Total	100	100

Chi-square: $X^2=69.599$; $df=8$; $p=0.00<0.05$.

their other responsibilities (3%). Yet, in-depth interviews also suggested that crop cultivation served men's interests as well in terms of fulfilling their social obligations. During good economic times men tend to rely on income from non-farming activities outside the home to meet their household obligations, including food provisioning. However, the difficult economic circumstances appeared to have limited men's ability to provide for their families causing many of them to take increasing interest in crop cultivation as an alternative source of living (see Chapters 8 and 9). Mhubiri's account is testimony to this:

The vegetables we grow on the plot are very important for the household. We save money on vegetables. We also buy sugar, milk and other minor household items from the sale of vegetables. Sometimes my children are also able to meet some school needs from the vegetables such as transport to school and books (...) Nowadays I take a lot of interest in urban farming because if I don't I will be the one expected to meet all these expenses. You can't manage at this time. It is very difficult to get money out there.

(Mhubiri, 30 May 2009)

Mhubiri's is one of many examples of men who, owing to persistent and growing economic hardships and shrinking opportunities in the 'masculine' public arena, were retreating into the 'feminine' domestic space in order to fulfil their gender roles and obligations. However, because of the continued social construction of home as a woman's place – and as such it being considered unmanly for men to just 'sit at home' most of the time – many men continued to venture outside the home, as a result of which they had little time to tend home gardens. But just as women's domestic responsibilities explained why they dominated home gardening, men's outdoor activities not only explain men's relative absence from home gardens but also the tendency for them to take primary responsibility for off-plot farming. Not to mention that off-plot farming was done on

relatively bigger plots and for both subsistence and income. Ongeri's³ is a case in point. A retired primary school teacher, Ongeri owns one-eighth of an acre plot in Langas settlement on which his household maintains a small vegetable garden measuring about 20 m², besides having access to two bigger plots in the peri-urban areas. While Ongeri's wife – a housewife who knits sweaters from home for income – was responsible for the home garden, Ongeri took primary responsibility for off-plot farming because his wife could not manage to take care of it due to distance, but also because of the scale of production and potential profitability (see Chapter 6). He expected to harvest about 60 sacks of maize from the plot. Estimating his household maize requirements to be eight sacks, Ongeri intended to sell the rest and make a 'decent income'.

As with their greater involvement with off-plot farming, men were also more likely to be responsible for crops that required relatively higher levels of technical knowledge and skills than women could muster (see Table 10.2). For instance, Onyancha personally took responsibility for the household garden because, as he put it:

I am the one who knows how to organize the plot, when to plant different crops, and how to prune them. I am also the one who understands better which chemicals to use and when and how to use them. My wife doesn't understand most of what goes on on this plot. The only crop she can handle on this plot is *sukuma wiki* (kale). But not the others like *dhanian* (parsley), green paper, spinach, onions, tomatoes and carrots. She only assists when it comes to harvesting and selling. Even then I must show her what is ready for harvesting and how the harvesting should be done so that other crops are not damaged.

(Onyancha, 23 May 2009)

It should be noted that most of the crops in Onyancha's garden are exotic crops that are not traditionally grown in Onyancha's rural home area, where both he and his wife, who share the Kisii ethnic background, grew up and from where they had migrated to Eldoret only recently. Thus, while home gardening may be traditionally associated with women, on account of the crops he cultivated, Onyancha was not subject to any particular social sanctions. Thus, his choice of crops amounts to a reconstruction of the 'feminine' domestic space in a manner that makes it socially acceptable (or tolerable) for a man to make a living within it (see Overå 2007). The couple also had comparable levels of education, having both dropped out of secondary school, on marriage, at the same time. However, while Onyancha soon after started looking for construction jobs in his rural town where he gained some masonry skills, his wife stayed at their rural home to attend to domestic chores, which she continued to do upon moving to Eldoret with her husband. As such, the knowledge gap between the couple regarding crop husbandry may be attributed to the man's outdoor activities and social networking, attesting to the value of public space as a source of agricultural information

³ Interviewed on 7 June 2009.

and knowledge. Yet it could also be argued that maintaining the status quo in terms of the knowledge gap and the resultant division of labour served the interests of Onyancha's wife by placing limited demand on her labour on the plot. Such would be consistent with literature on intra-household bargaining that documents how women in diverse contexts have sometimes exploit their social spaces to advance their livelihood goals and interests and/or to challenge gender norms (see e.g. Mwaipopo 2000; Freidberg 2001; Trauger 2004).

Performance of tasks related to crop cultivation

Respondents were asked whether they personally performed selected tasks related to crop cultivation. Table 10.3 presents data on the relative involvement of men and women with selected tasks in the 40 households where both spouses were interviewed (of these, 36 performed crop cultivation). It can be inferred from the table that the distribution of the tasks between spouses was gendered. For instance, men were involved more with fencing, and with finding seeds, fertilizer and pesticides as well as applying pesticides, while women were involved more in plot preparation, planting, weeding, harvesting and marketing.

Table 10.3 Performance of crop-related tasks, by gender (%)

	N	Men	Women
Finding seeds/seedlings	52	62	39
Plot preparation/plowing	47	38	62
Finding fertilizer	23	65	35
Sowing/planting	58	43	57
Weeding	42	29	76
Finding pesticides	21	81	19
Applying pesticides	22	73	27
Harvesting for home use	39	10	90
Harvesting for sale	27	30	70
Selling produce	30	23	76

Chi-square: $X^2=62.919$; $df=9$; $p=0.00<0.05$.

In-depth interviews provided insights into the role of social constructs of maleness and femaleness in partly explaining patterns of labour allocation. Men tended to perform what were considered to be difficult or hard tasks while women's tasks were considered to be easy or less strenuous. Thus, the feminization of land preparation, a task that is traditionally considered a man's job, owes to the fact that unlike in rural areas where it usually involves bush clearing and/or tilling of hardened grounds, most plots in Langas were relatively small and were

continuously worked making the task less laborious. Men tended to be involved in the tilling of land, as well as fencing of plots, when the work to be done was generally considered hard or strenuous. Where no male household member was available to perform such tasks (as was common in female-headed households), external male labour was hired to do the job if the household concerned could afford. Tasks that were performed by women such as weeding, harvesting and selling of produce were considered to be less strenuous and therefore manageable for them:

I hired someone to help me dig the ground when I wanted to plant crops on this plot for the first time. The ground was so hard and it required a man to dig it. After that I have been doing the rest myself. I always have crops on the plot every time of the year so most of the time it is just weeding.

(Mama Shiko, widowed, interviewed on 12 June 2009)

I do most of the hard labour and my mother does the rest (...) We rarely apply chemicals and chemical fertilizer on our farm but whenever we do, it is me who takes responsibility because my mother would not know the right chemicals to apply and where to purchase them. She cannot also understand instructions (...) Fencing is my main responsibility; I cannot expect my mother to dig holes and to do the fencing because it is a difficult task.

(Kimani, a widow's son, 20 June 2009)

Another feminine attribute that was invoked to explain women's suitability for the task of marketing farm produce was their supposed bargaining skills; although some men, from across the ethnic groups, attributed their own limited participation in the selling of vegetables simply to cultural sanctions:

Most vegetable buyers are women. And you know women are very difficult to deal with. They will always complain about one thing or another. Either that the vegetables are of bad quality or that the amount of vegetables you have given them is too little for their money, and so on. They need someone who is patient enough and who can bargain with them. That is why I leave it to my wife to sell the vegetables.

(Waswa, 1 August 2009)

Mostly it is my wife who sells vegetables in the plot because it is her fellow women who come to buy. In my culture men are not supposed to involve themselves so much with vegetables. That is women's department. But sometimes when she is not there I can sell, although mostly I will call my daughters to sell.

(Mhubiri, 30 May 2009)

Mhubiri's comments above also show how the social construction of vegetable home gardens as women's (physical and social) spaces restricted men from appropriating opportunities accruing to such spaces.

It should be noted that besides just being easy to perform or requiring other feminine attributes or sanctioned by culture, some of the tasks left to women were those that were performed on a regular and repetitive basis. As such, they not only required the attention of someone who kept around the homestead most of the time, but also took up cumulatively substantial amounts of time. Indeed, some of the tasks that were socially constructed as 'easy' were not necessarily

perceived as such by the women themselves. Rather, as many women's accounts regarding their responsibility for weeding illustrated, the women perceived such tasks as requiring specialized skills that only they possessed and hence their hesitation (i.e., in most instances) to give up such responsibilities. Compared to women's tasks, men's tasks were mostly those that were undertaken on a one-off basis or only intermittently and as such took up less time relative to women's. In addition, such tasks were more likely to require a certain level of technical knowledge and information, financial resources or access to the market. The excerpts below illustrate these patterns:

My husband buys the seeds. I am the one who plants and weeds because most of the time he is out looking for a job. However, when he is around we do it together (...) When the maize is ready for harvesting we assist each other. He cuts down the maize, then I harvest. I am responsible for weeding the vegetable garden, while my husband buys chemicals and sprays the vegetables.

(Mama Ben, 8 June 2009)

Mostly it is my wife who weeds the plot. The children also assist her when they are not in school. I do not do it because I am not there most of the time. My main task is spraying the crops with pesticides. My wife and children cannot manage that role.

(Lang'at, 3 August 2009)

My wife stays at home and does most of the work on the *sukuma wiki* garden. I buy maize seeds and fertilizer because I know better how maize is planted, which seed variety to plant and fertilizer to apply. In addition my wife does not work so she cannot afford the cost of seeds and fertilizer.

(Shikuku, 9 July 2009)

When you look at the plot you will realize that it is difficult for anyone else to weed it because it is crowded with different crops (...) I do not even allow my sons or any other person to venture into the garden because they will trample on the crops. I am the only person who knows how to weed it.

(Mama Shiko, 12 June 2009)

The patterns captured by the excerpts above also reflect skewed gender relations, and men's superior entitlements in terms of financial resources and knowledge and information.

Another pattern that can be discerned from the urban farmers' responses is that men exercised greater control over women's labour than women over men's labour. Men could make decisions on what should be done and leave the rest to their wives. They would only give 'a helping hand' at their own time and when they did, they mostly performed tasks which, in their view, could not be managed by their wives or other household members. This is clearly captured in the following comments:

Although my husband decides what we should plant and brings seeds and seedlings, he does not himself participate in the planting, leave alone weeding. He leaves everything to me. The only task he performs is the spraying of the vegetables when they are attacked by pests.

(Muronji, 19 July 2009)

His (the husband's) main responsibility is to look for chemical fertilizer and pesticides whenever they are required. He does not weed. I cannot even imagine asking him to weed. He cannot accept to do it. However, he participates in planting, but not always.

(Mama Sella, 30 May 2009)

However, as in the case of taking responsibility for crops, a closer look at the various testimonies referred to above reveals that while the farmers were alive to cultural norms relating to gender division of tasks, in many cases both men and women showed flexibility. There did not seem to be a rigid distinction about male and female tasks, nor particular sanctions for those performing 'untraditional tasks'. Often the farmers predicated their non-participation in certain activities to constraints other than cultural norms. As is now apparent, men generally cited the time constraint as the main reason they did not participate in many urban agriculture activities, while women tended to be handicapped more by a lack of technical knowledge and information. And even those, like Mhubiri, who subscribed to cultural norms related to work did, under certain circumstances, perform tasks associated with the opposite gender.

Flexibility with regard to male labour was also observed where gardening took place off-plot, and where the activities to be performed were time-specific. Women were usually constrained by time and distance given their reproductive responsibilities in the home from participating fully in off-plot urban farming, not only in taking responsibility for crops but also in performing the tasks they would ordinarily perform in their home gardens. In the circumstances, either the male household members would perform such tasks or outside labour would be hired for the purpose. It was common, however, for households involved with off-plot farming to mitigate the constraints of female labour by cultivating crops that were less labour-intensive and that required only occasional attention. In terms of seasonality and time specificity of activities, the onset of rains would, for instance, cause someone like Mhubiri – who ordinarily leaves farm work to his wife and other household members – to suspend his masonry work and participate in land preparation and planting “because the rains cannot wait for you”.

The crossing of traditional gender boundaries was similarly evident among unmarried women who neither had access to male labour in their households nor could afford to hire external labour. Such was the case with Redempta⁴ who noted thus: “I do all the work on this plot because there is no one else to assist me. I buy seedlings, weed and harvest (...) I do everything by myself.” Similarly, women whose husbands were mostly absent from the home were also more likely to perform most urban agriculture tasks, including those that are considered men's tasks.

⁴ Interviewed on 26 May 2009.

Division of responsibility for livestock

Compared with crops, spouses tended to jointly take responsibility for livestock, especially large ones, to a greater extent. This was the case in 19% (N=179) of instances involving all livestock and in 22% (N=101) of the instances involving large livestock (see Appendix 10.2). However, women still shouldered the bigger burden, being twice as often to assume responsibility for livestock, although their (as well as men's) level of involvement varied between large and small livestock. Whereas their role in both cases was greater than that of men, women were represented more among primary care takers for small livestock than for large ones. Considering the decision-making patterns in these respects (see Chapter 9), it can be construed that women more often took responsibility for men's livestock (mostly large livestock) than men were willing to give a helping hand to the women for the latter's livestock (mostly small livestock).

The reasons for taking responsibility for livestock varied significantly between men and women (see Table 10.4). Like in the case of crop cultivation, the time factor was an important reason why either men or women were responsible for livestock. The importance of the time factor relates to the fact that the keeping of some animals, particularly dairy cows, but also confined pigs, were labour-intensive undertakings that, in the words of one urban dairy farmer, "was like a full-time job with which one could not do much else".⁵ Women were more likely

Table 10.4 Reasons for taking responsibility for livestock, by gender (%)

	Men	Women
No. of instances:	40	97
Own initiative/investment	41	21
Culture/tradition	13	14
Has technical knowledge	10	1
It is just a small project	5	6
It benefits me the most	0	9
Have time	21	39
Relates to other responsibilities	0	6
Cannot afford hired labour	8	0
Spouse's decision	3	4
Total	100	100

The statistics refer to the 137 instances where only one spouse was solely responsible for the livestock. In the remaining 42 instances, both spouses were jointly responsible.

Chi-square: $X^2=28.052$; $df=8$; $p=0.00$.

⁵ Wandera, interviewed on 30 May 2009.

than men to have been responsible for livestock on account that they had time to do so.

Whether or not the keeping of livestock was a personal initiative or investment for a spouse was another important determinant of the spouse's involvement with the livestock. This reason was cited in one third of all instances, and was more important among men than among women. The fact that 'own initiative/investment' was a more important factor in livestock than in crops could imply that livestock keeping was a more individual livelihood strategy compared to crop cultivation. In-depth interviews revealed that this was more the case with sheep, pigs and small livestock than with dairy cows. Mhubiri's case is illustrative. The farmer used to keep pigs, which he personally took responsibility for. According to his wife, "[T]hey (the pigs) were his property and he would sell them any time as he wished. He would never ask anyone or reveal the price at which he sold the pigs". Mhubiri's household also kept sheep that, unlike pigs, were shared out among family members, a strategy that had been adopted, as he explained, "to remove any conflict in the household and to motivate family members to take greater interest in taking good care of the animals". However, whereas he could sell his sheep whenever he chose and for whatever reason, his wife was not as privileged. Although Mhubiri had no problem with his wife selling chickens and ducks, he had this to say about the sheep:

When it comes to selling sheep, I normally do not involve my wife. Sometimes there are pressing issues to sort out urgently such as paying school fees or an electricity bill. But if I were to consult her about the need to sell some sheep, she would not agree with me. She would say that men should look for money from elsewhere to solve family problems instead of selling household assets. In the circumstances I decide to sell by force, even when I know she would feel bad about it. (...) I cannot give her that freedom (to sell sheep). Even when I am far and there is an emergency that would warrant selling of sheep, I must give authority before she can sell the sheep. You must always draw boundaries with your wife, otherwise you may one day return home only to find that she has sold your livestock and gone away. Our culture does not allow women to sell sheep. Were that to happen, elders would have to be called in.

(Mhubiri, 30 May 2009)

Mhubiri's wife echoed her husband's sentiments, including cultural restrictions on women's ability to sell livestock. However, as was shown in Chapter 8, single women from her community exercised greater control over their livestock – large and small – and could sell them whenever without any restrictions.

Although it influenced the farmers to a limited extent, the role of one's knowledge and information about the animals for which they took responsibility revealed clear gender differences, being a more important factor among men than among women. In-depth interviews revealed, for instance, that dairy cows and pigs required a certain level of technical knowledge and information related to sourcing for feeds, accessing veterinary services (common with cows), and find-

ing the market for the animals (common with pigs). For these reasons – coupled with the labour requirements discussed above – the keeping of dairy cows and pigs was men’s primary responsibility in most instances. On the other hand, sheep and small livestock were easier to keep; hence, women’s labour was more visible.

Performance of specific tasks related to livestock keeping

As in crop cultivation and for more or less the same reasons, patterns of task-sharing among spouses in livestock keeping households were gendered, although to a lesser extent. Table 10.5 suggests that in the 40 households where both spouses were interviewed (of which 28 kept livestock), men were more often involved with tasks that were undertaken only occasionally, and that required a bit of more technical knowledge and financial resources, as well as the ones that were of an outdoor nature. Men more often fenced plots, purchased animals on the market for rearing, sought veterinary services for their animals, treated the animals, and grazed them off-plot.

Table 10.5 Labour involvement in livestock-related tasks, by gender

	N	Men	Women
Securing plot	13	11	2
Purchasing animals	18	11	7
Seeking veterinary services	11	8	3
Treating animals	12	9	3
Cleaning pens	20	2	18
Finding feeds	24	11	13
Feeding animals on-plot	24	9	15
Grazing animals off-plot	2	2	0
Watering animals	24	5	19
Milking animals	5	2	3
Selling animal products	14	5	9

In contrast, women’s tasks were commonly carried out within the households’ compounds, and performed on a more regular and routine basis. The tasks included the cleaning of animal pens, and feeding and watering of the animals on-plot. However, there were other tasks that were performed by both spouses to more or less the same extent, such as finding animal feeds, milking and selling animal products. Whether and to what extent men and women shared livestock-related tasks also depended on the type of livestock involved, the nature of dif-

ferentiation of tasks related to its upkeep as well as the motive for keeping the livestock. Although it was noted above that men dominated dairy and pig-keeping enterprises because they were labour-intensive, it must be pointed out that female labour was still important, but more so in the case of dairy cows as compared to pigs. This is due largely to the fact that the latter were kept for a purely income motive while the former were kept for both income as well as direct home consumption of milk. In addition, unlike pigs whose care was less differentiated and revolved only around feeding and watering, rearing of cows was multi-tasked with a clear gender division of tasks. Milking, selling of milk and on-plot watering were mainly done by women, either because the tasks were performed on-plot or they required certain feminine attributes such as marketing/bargaining skills in the case of selling milk. Thus, there was greater room for co-operative arrangements between spouses in the context of dairy cows than in the case of pig keeping. This is reflected in the following narrative:

Wandera and his wife, Auma, had been keeping dairy cows since 1993 when he was still employed by Rift Valley Textiles. His wife used to perform most of the tasks then and he would only assist whenever he was not working. However, after leaving his job, he got involved more with the livestock and shared tasks with his wife. He would look for fodder in open spaces and on people's plots and once he brought it home, it was his wife's responsibility to feed the animals and give them water. Cleaning the pen, milking and selling of milk were also done by Auma. Whenever the cows fell sick it was Wandera to look for a vet or for veterinary drugs. However, since Auma's health started deteriorating in 2005, Wandera had to take up most of his wife's responsibilities, much like she did when he was still employed. Drawing from his experience, Wandera advised thus:

"It is important that both spouses understand various aspects of rearing cows. They should also like livestock keeping and be willing to assist each other. Were it not for my wife, we wouldn't be having these cows. You know, men are not people who stay at home or at one place, so unless the wife understands what to do with the animals you cannot succeed. Similarly, should anything happen to your wife and you can't do what she used to do, then you are finished. My wife used to do most of the work when I was still employed and now I do most of it because of her poor health."

(Wandera, 30 May 2009)

Where income was the main motive for keeping livestock and the upkeep of the livestock involved only a few tasks, gender division of labour sometimes reflected individual household members' preferences and interests, and the crossing of gender boundaries was common. For instance, some men monopolised certain livestock-related activities including those that are ordinarily performed by women as a strategy to control income, and to illegitimate any claims by their wives to the income. The division of labour between Obachi⁶ and his wife, Kerubo,⁷ illustrates this point.

⁶ Interviewed on 6 June 2009.

⁷ Interviewed on 6 June 2009.

The couple kept livestock, including two dairy cows and four pigs. Obachi took overall responsibility for the livestock. He looked for feeds, took cows and sheep out for grazing, watered them, etc. His wife assisted him with watering cows, and especially milking the cows and selling surplus milk. Obachi did not ask about income from milk sales so long as there was food in the house. However, as his wife pointed out, “When it comes to pigs, he prefers to do everything by himself. He never asks for assistance.” In the end, and much like Mhubiri above, he sold his pigs whenever he wanted without consulting his wife because, as he claimed, “doing so only precipitates quarrels especially when she knows how much money I will get”.

The importance of Obachi’s strategy of assuming all responsibilities related to pig keeping is underlined by the fact that in some cases women reportedly resisted men’s unilateral actions of selling animals and negotiated access to income accruing to livestock sales by threatening to withdraw their labour subsequently. One pig farmer explained thus:

It is common in this area for men who keep pigs to look for a potential buyer and even receive payment in advance without the knowledge of their wives. But when the person comes to take away the pig(s), most women usually protest and refuse to give away the pig(s) unless they see the money. Often the men would have already spent part if not the whole of it. Women resist because they are sometimes the ones who do most of the work related to pig keeping. When such a thing happens, the man will have no choice but to listen to the wife, otherwise she will refuse to attend to the animals subsequently. Such incidences happen all the time in this area.

(Njoroge, 23 May 2009)

Summary, conclusions and recommendations

This study set out to explore how gender dynamics in urban agriculture shaped the construction of household livelihoods and impacted livelihood outcomes of farming households, and of individual men and women. This was intended not only as a contribution to the emerging body of knowledge on the importance of gender in urban agriculture, but also to the debate on policy implications for sustainable and equitable urban agriculture. Considered from a livelihoods perspective, the study conceptualized urban agriculture as constituting one of the livelihood strategies that were adopted by urban residents – and one which was inter-linked with other livelihood strategies in varied ways – against a backdrop of a wide range of trends and events that defined urban residents' vulnerability contexts and increasingly strained their abilities to sustain household livelihoods and individual well-being. Such trends and events included loss of jobs following closure of, and retrenchments from, industries based in Eldoret and beyond due to macro-economic restructuring, as well as declining incomes, diminishing job opportunities in the local job market, and escalation of commodity prices. The most dramatic event during the course of the study was the post-2007 election violence.

The extent to which urban farmers were able to make a living from urban agriculture was mediated by various institutions and processes, operating at multiple but inter-locking scales. Of particular interest was how the various national urban agriculture-related laws and policies were implemented within Eldoret municipality, and how they impacted opportunities for the farming men and women. At the household level, the study focused on gender relations and how these mediated men's and women's access to resources, the respective roles they played in the construction of household livelihoods in general and in urban agriculture in

particular, and the implications of these not only for household livelihoods and individual well-being, but also for urban agriculture policy.

The first of three sections of this chapter that follow summarizes the key findings of the study and reflects on related theoretical postulations. The second section discusses the implications of urban agriculture policy for urban households and gender mainstreaming in light of the foregoing findings. The chapter ends with some recommendations for further research.

Summary of findings and theoretical reflections

Urban agriculture policy

Chapter 5 demonstrated how the interplay of national and municipal laws and policies, and the politics surrounding their enforcement shaped the practice of urban agriculture within Eldoret municipality. It showed how the contradictions and inconsistencies inherent in national legislations and policies, and the negative official attitudes towards urban agriculture within Eldoret Municipal Council (EMC) have not only engendered contradictions in the application of existing laws and policies within the municipality, but also impeded the evolution of a more responsive legal and policy framework for urban farming. In exercising its discretion about which national laws and policies to effect within its jurisdiction, the EMC has in most cases restricted and criminalized urban farming, with particularly stringent regulations being directed towards livestock-keeping. The EMC also tended to enforce its by-laws selectively, exercising leniency towards some sections of the farming community while harassing others on the basis of their ethnic identities. In addition, some EMC and government officials also practised urban agriculture, while some national government agencies and non-governmental organizations participated in promotional activities for urban farming against the EMC's wishes. These dynamics emboldened the resolve of urban farmers to continue farming despite the restrictions they faced.

Whether due to a lack of moral authority or the capacity to enforce its own by-laws against a resilient farming community, or due to its relative powerlessness vis-à-vis national government agencies involved in promotional activities, the EMC has had to tolerate urban agriculture in the town. The laxity in enforcing its by-laws also reflected the growing appreciation of the value of urban farming to the households involved, and of the challenges implied in land-use change in areas newly incorporated into the municipality. However, the tolerance of urban agriculture has not been accompanied by a change in official attitude and policy at the municipal level, which remain unfavourable and at best ambivalent towards urban agriculture. The EMC's latest set of by-laws (2009) do not make any provision for the support or regulation of crop cultivation and are prohibitive

of livestock keeping. On its part, however, the national government recently initiated policies aimed at regulating and supporting farming in Kenya's urban areas.

The EMC's tolerance of urban agriculture despite its anti-urban agriculture policies, and the government's recent pro-urban agriculture policy responses demonstrate that while meso-macro policies and institutions do shape individual's micro contexts for livelihood construction, the livelihood strategies individuals pursue at the micro-level may in turn impact meso-macro policies and institutions as well (e.g. Brons *et al.* 2005; Oberhauser & Hanson 2007). Also highlighted is the fact that institutions are necessarily dynamic and subject to multiple interpretations, contestation and negotiations (Scoones 1998) and that they also impact the livelihood options of different individuals and collectives differently, depending on their positioning within the social and power structures within which they are situated. Moreover, policy and institutional changes at the meso-macro levels must be understood not only from the point of view of the agency of urban farmers *per se* but, importantly too, from the point of view of the tensions between formal and informal policies and institutions, and the role of external actors and their relative power relations.

Access to farming resources and constraints

Farming households and individual men and women accessed the various farming resources across the five asset/capital categories – i.e. natural, physical, financial, human and social – to varying degrees, and with varying implications for household and individual outcomes. While all farming households had, by definition, access to land of some kind, the spaces under cultivation were generally small and perceived as inadequate by the majority of the farmers. Farming households established entitlement over the farming spaces mainly through purchase, social connections, and informal use of land around their dwellings. While those who owned land had unrestricted freedom of access to and use rights over such plots, the rest enjoyed tenuous use rights. For a variety of reasons, including social norms and cultural practices related to inheritance and ownership of land as well as better economic status, most farming spaces were owned or accessed by men in male-headed households; but female household heads also accessed land in their own right, although they did so to a limited extent and their holdings were generally smaller than men's. However, despite high incidences of non-ownership of land among them, women seemed to enjoy considerable access and use rights over household land for farming, but such rights were more limited for other land-uses such as housing. As such, many married women did not prioritize land ownership, preferring instead to negotiate the use of their husbands' plots.

Unlike married women, female household heads enjoyed greater control over the use of household land holdings for whatever uses.

Most farming households had access to water sources – mostly shallow wells and piped water – that were not only located within short distances of their dwellings, but also reliable all-year-round and, in the case of well water, accessible at no financial cost. However, a very small proportion of farming households irrigated their plots and those who did did not practice full-time irrigation. Many farmers considered drawing water from the wells to be cumbersome with some choosing to use piped water instead, although this was prohibited by the municipal council. Most crop cultivators practiced rain-fed agriculture and adapted their farming systems to rainfall seasonality and variability.

Financial credit tailored for urban agriculture was not available in Eldoret, and the farmers' plots lacked titles that could be used as collateral for loan acquisition from formal banking institutions. This constrained farmers from accessing additional farming spaces to increase the scale of production. It also limited their ability to modernize, intensify and optimize productivity of available spaces, and to engage in high-value agricultural enterprises. And whereas many women participated in informal credit-based social networks through which they accessed credit, such credit was rarely (re-)invested in urban agriculture. Many farmers relied on their limited personal savings and incomes from non-farming sources to make only modest investments in urban farming. Men tended to have greater access to such incomes due to their higher levels of participation in the informal sector. Financial resources for investment in urban agriculture were also generated through the sale of crop produce and livestock.

Although extension services were available in Eldoret, only a small proportion of the farmers had benefited from the services. Some farmers did not consider it necessary to seek the services, either because of the uncertainty over the future of urban agriculture, their view of urban agriculture as a marginal activity that did not require much investment, a lack of awareness about the existence of farming technologies that could improve productivity of their holdings or, in the case of women, a lack of time due to domestic responsibilities. The effectiveness and reach of extension services were also constrained by the lack of a structured urban agriculture extension programme, and by restrictions on urban agriculture by the municipal council as well as by inappropriate approaches adopted in targeting the farmers. As a consequence, farmers relied mostly on traditional knowledge and skills, and/or informal networks for agricultural information, and tended to adapt non-optimal farming systems and practices that were often not appropriate for the urban context. Because of their reliance on traditional knowledge and skills, men's and women's agricultural knowledge and skills were gendered, somehow reflecting the traditional rural-based agricultural division of labour and

roles. However, men's relatively higher literacy levels and greater spatial mobility enabled them to appropriate agricultural knowledge and information available in the public space to a greater extent than women.

The farmers, and particularly female household heads, derived a number of inputs from the local environment such as manure, crop residues, local seeds and seedlings for crop cultivation. Male-headed households accessed market-based inputs such as chemical fertilizers and pesticides to a greater extent than female-headed households. Livestock keepers also relied on the open spaces, dumpsites, garbage heaps and urban waste available in the local environment for livestock inputs. They also procured some inputs from the market, namely veterinary drugs and feed supplements. Most livestock keepers raised local breeds which, although considered more disease-resistant and less costly, were less productive.

Aside from the constraints related to access to farming resources, urban crop cultivators faced other constraints as well. Pests and diseases was the most prevalent problem among both crop cultivators and livestock keepers, and in both cases women and especially female household heads were the most affected. Theft of crops was also prevalent and was perceived more as a problem by women compared to men. Rainfall unreliability and variability, poor soils, and destruction of crops by livestock (of others) were also reported by crop cultivators. Other problems perceived by respondents as constraints to livestock keeping included conflict with neighbours, labour shortages, and theft of livestock.

Several conclusions can be drawn from the foregoing patterns of access to farming resources by households and individual men and women. Whether it is women's use rights over their household's farming spaces, or (under)utilization of the widely available water resources for irrigation and extension services to improve productivity, as has come to be emphasized in livelihood and gender studies (Bebbington 1999; Mandel 2004; Kabeer 1999), access to and not just availability of resources is critical in livelihood construction. And while more focus has been placed on the role of formal policies and institutions in mediating access to resources (Brons *et al* 2005), it seemed the case that at the household level informal institutions related to culture (i.e. social norms and gender ideologies) were perhaps more important, not least because they imbued assets and livelihood options with varied meanings for men and women. In the particular case of land, for instance, women's relatively easier access to household land for farming compared to its use for housing shows how social norms and gender roles can not only influence men's and women's livelihood options, but also shape how men and women relate to and value different livelihood assets and, related to this, prefer different modes of establishing entitlement over the assets.

Moreover, whether and how men and women exercised their agency in identifying probable livelihood opportunities, and whether they optimally utilized as-

sets available to them in making a living was dependent on their capabilities. Thus, the fact that many urban farmers underestimated the potential productivity and profitability of urban agriculture and in the process underutilized available extension services and/or withheld financial investments from the activity goes some way in sounding caution over the livelihood perspective's over-emphasis on poor people's agency. However, while this also makes the case for external interventions in catalyzing the agency of the poor to enable them realize greater potential of their assets, attention must be paid to the implications of such interventions for the meanings that men and women attach to, and their claims over, the assets involved and the activities to which they deploy the assets to earn a living. In other words, the potential impact of external interventions on household livelihoods, personal well-being, and gender relations cannot be underestimated.

Contribution of men and women to household livelihoods

Complementarities between men's and women's roles and livelihood activities in the construction of household livelihoods were apparent within conjugal households. Such roles and livelihood activities were underpinned by social norms and gender roles and responsibilities, and by personal agency augmented by individual capabilities and entitlements, which varied between and among men and women.

Men and women were responsible for different spheres of household well-being obligations. Generally men were regarded as overall breadwinners and decision-makers responsible for household provisioning, children's education, medical expenditure, housing, and other 'major' investments that involved lump-sum expenditures (e.g. land purchase). On the other hand, women were expected to take care of 'minor' household expenditures, food preparation, childcare, and home-keeping. However, as was apparent in Chapters 4 and 6, the prevailing economic circumstances had increasingly diminished men's abilities to effectively provide for their families, forcing many women to play more prominent roles in household provisioning as well, mostly by engaging in diverse activities in the informal sector, key among them being urban agriculture.

As with urban farming, most non-farming livelihood activities of choice for women were generally interconnected with their gender roles and home-keeping, and as such they primarily focused on food provisioning and were highly localized. The latter point illustrates the local embeddedness of the livelihoods of (female) urban farmers. In some cases, however, women did not only engage in more economically visible livelihood activities and venture into the public sphere – which is socially constructed as men's domain – but also became 'real' breadwinners for their households. The extent to which women took up this challenge was determined by a confluence of various factors, including ethnicity, age, and

socio-economic status within their households – implying that women (and men too) should not be treated in development planning as if they constitute homogeneous categories. Yet as a result of the contraction of livelihood opportunities for men in the public sphere, they were on their part increasingly retreating into the feminine domestic space to explore alternative means of providing for their families – mostly in urban agriculture – sometimes with adverse implications for women's economic independence and autonomy. Such dynamics illustrate the fluidity of the gendered private/public spatial divide and its role in the (re)production of gender inequalities in changing economic contexts (see Youngs 2000).

As was indicated in Chapter 6, complementarities between men's and women's livelihood activities within household livelihood systems were mostly observed among spouses. Other household members who participated in livelihood activities were not only few, but also in most instances seemed less obligated to contribute towards household well-being. School-going children were also rarely mobilized to augment household livelihoods, except when their participation in livelihood activities did not interfere with their school work. Moreover, the complementarities between men's and women's livelihood activities did not necessarily involve complete disclosure and pooling of incomes, nor were the activities always intended for a shared household livelihood outcome. Most men and women pursued personal interests concurrent with their contributions towards household well-being. And while the pursuit of household livelihoods involved a certain level of co-operation between spouses, their personal interests were sometimes in competition or in conflict. Individuals' contributions towards household livelihoods were informed by their gender roles and responsibilities as well as perceptions of their obligations and of those of others. However, non-disclosure of incomes limited spouses' claims on each other's incomes thereby blurring such perceptions.

That children in farming households were less involved in urban agriculture and other livelihood activities – as their parents privileged their education instead – is relevant to the debate as to whether poor people's so-called livelihood strategies are actually borne out of strategic decisions or are simply here-and-now reactionary responses to adversity without an eye on the future. This particular case illustrates that the urban farmers did, to some degree, sacrifice their present circumstances and possibilities for short-term livelihood enhancement with a view to breaking intergenerational transfer of poverty. As for urban agriculture, however, the non-participation of children threatens its sustainability into the future, if it is recalled that many urban farmers relied on traditional knowledge gained from their farming backgrounds. Also to be considered among 'strategic' actions were the decisions by many urban farmers to limit investments in urban agriculture for fear of losing out due to EMC restrictions, or to avoid the vulner-

abilities associated with rainfall variability. Moreover, most of those who preferred to invest the income gained from urban agriculture in housing rather than re-invest it in urban farming considered their actions as a strategy of securing their old age when they would no longer be able to farm.

Men's and women's contributions to urban agriculture

The contributions of men and women to urban agriculture are considered here in terms of their decision-making roles and labour contributions. Urban agriculture literature has demonstrated how gender division of labour results in inequalities in livelihood outcomes for men and women, and how different patterns of labour allocation derive different outcomes for farming households. It has been suggested, for instance, that because women prefer and channel their labour predominantly in subsistence enterprises, their decision-making roles and labour contribution in urban agriculture hold greater prospects for household food security and well-being than men's decisions and labour which tend to dominate income-related urban agriculture activities and to derive greater personal benefits for men (see Jacobi *et al.* 2000).

Chapter 9 showed that men and women played different but complementary roles in decision making and that the roles were influenced by various factors, including relative control over farming resources (especially land), social norms and gender roles, personal agency, individual as well as household socio-economic standing, and the scale of agricultural production and its perceived economic visibility. Consistent with most urban agriculture studies in sub-Saharan Africa, it was the case that the initial decision to farm was mostly taken by women, and that they showed preference for subsistence crops and small livestock. Where men took the initiative, they tended to go for income-earning crops, large livestock, and to be involved when the scale of production was economically more visible. However, men were increasingly turning to subsistence farming (mostly cultivation of maize) to provide for their families as their non-farming income sources declined. Because of the conflicting interests between men and women on the one hand, and given the limited farming spaces available to households, on the other hand, power relations between men and women also came into play in determining whose decisions prevailed. And although men generally wielded greater decision-making power at the household level, women employed a variety of strategies and especially exploited their social spaces and gender roles to negotiate a bigger role in decision-making related to choice of crops and livestock, and use of urban agriculture products and income.

Chapter 10 confirmed that indeed women provided most of the labour in urban agriculture. The influence of social norms and gender roles on men's and women's labour contribution manifested in the type of agricultural activities and

tasks performed, the spatial segregation of the activities and tasks, and in labour access and control patterns. Because of their reproductive responsibilities, women dominated home gardening involving subsistence crops as well as the keeping of small livestock. Men, on the other hand, were involved to a greater extent with off-plot farming activities, those undertaken primarily for income and with large livestock, especially dairy cows and pigs. And in conforming to constructs of maleness and femaleness, men also performed what were considered difficult tasks while women performed 'easy' tasks. However, women spent longer hours than men on farm work because women's tasks were usually of a repetitive and routine nature while men's were usually undertaken on a one-off basis or only occasionally. Moreover, as the main household decision makers, men exercised greater control over women's labour but women had little or no control over men's labour.

The gendering of activities and tasks was also augmented by gender differentials in capabilities embodied in entitlements and farming knowledge and skills. Men and women sometimes performed certain tasks whose responsibility they were reluctant to give up on the assumption – rightly or wrongly – that they were the most knowledgeable about, and the most able, to perform them. In circumstances of unequal control over household labour, the gendered agricultural knowledge and skills enabled women to make claims on men's labour. There was evidence, however, that in certain circumstances some men and women crossed (or were willing to cross) gender boundaries and performed activities traditionally associated with the opposite gender in response to economic realities, shortage of labour of the opposite gender in the household, and because of the need to control benefits associated with the activities.

These decision-making patterns and gender division of labour had implications for livelihood outcomes. As would be expected, women's dominance of subsistence crops and their responsibility for small livestock and for certain tasks related to large livestock (e.g. milking) enhanced their control over the use of agricultural products thereby improving the availability of the products for home consumption. As primary marketers of farm produce and main decision makers on income use, women were also able to access income necessary for meeting other household needs. Agricultural decisions taken by men, especially at the level of produce and income use tended to mostly benefit them individually. As was shown in chapters 8, 9 and 10, this was particularly common with the sale of large livestock. However, it was evident that women did exploit their social space to also derive personal benefits from their labour and to advance their personal interests. They took advantage of men's general underestimation of the economic value of urban agriculture as well as men's relative absence from the home to underreport or even completely conceal the income from home gardens

as a strategy of gaining some economic independence and autonomy. Because of women's care giving and food provisioning responsibilities, some men also willingly ceded to them control over the use of agricultural output and income. Thus, while women's participation in urban agriculture might have been burdensome, the assumption of responsibility for crops, as well as livestock, was actually self-rewarding for them.

Granted, men's control of the more profitable enterprises – especially large livestock – derived greater personal benefits for them than for women despite the latter's labour contribution. However, in circumstances where women's labour was critical to the success of the enterprises, it became an important fall-back position for women in the household bargaining process. Co-operative arrangements and improved relations between spouses were more likely where women's labour was important, while in other cases women used the threat of labour withdrawal as a bargaining chip to share in income from livestock sales. But as Apusigah (2009) has pointed out in a different context, the consequence of gender inequalities and the socialization process that reproduces them is that such actions by women – as recounted, for example, by Njoroge in Chapter 10 – often yield limited gains “as they (women) negotiate and bargain within prescribed limits” and with little else (beyond labour) in terms of fall-back position. This is reflected in Mhubiri's explanation (captured in Chapter 10) as to why he often sold sheep by force whenever there was need despite knowing that his wife would protest and feel bad about it.

With regard to men's increased involvement with subsistence farming as an alternative means of meeting their social obligations to their households, the implications for household and individual outcomes were mixed too. Because they were relatively better-off in terms of resources entitlements and capabilities, men's involvement improved their household's access to inputs as well as labour for tasks that women could not manage. Indeed, evidence elsewhere has shown that men are less likely to yield to women's requests for urban agriculture-related support if they are not involved in and/or they undervalue urban farming (see e.g. Toriro 2009). In addition, and as several cases referred to in Chapters 8, 9 and 10 indicated, whenever there was any surplus farm produce to be sold – and for which the men were aware – most men did not ask for income from such sales. Thus, it may be concluded that where productivity and profitability was good, women would gain greater financial autonomy to respond to both household needs as well as personal interests. However, in many instances it also led to men scaling down on household provisioning thereby increasing women's burden of providing for their households.

The importance of urban agriculture: motives and needs of men and women

Urban agriculture achieved various outcomes for farming households and derived varied meanings – material as well as non-material – for individual men and women. It is evident from the foregoing discussion that, owing largely to their gender roles and responsibilities, men and women had different interests and preferences in urban agriculture and benefitted differently from it. This conclusion notwithstanding, both men and women tended to have a shared vision regarding the most immediate and basic household survival needs, namely to enhance food availability and income to meet basic household requirements.

The main motivation for men's and women's participation in urban farming was the need to enhance food availability at the household level, and to earn and/or save some income. It was clear that most respondents turned to urban farming in an effort to diversify their portfolio of activities to cope with economic hardships, mostly after incomes from other non-farming activities were no longer sufficient to support their families. They also participated in urban agriculture for cultural reasons, to gain economic independence, to utilize available space, and as a pass-time.

Overall, urban agriculture only made marginal contributions to household food supply and incomes, but such contributions were nonetheless significant for household survival at some critical moments. Although non-farming activities constituted the main sources of livelihood for most farming households, there were nonetheless important linkages and trade-offs between the two types of activities. In other words, the contribution of urban agriculture to household livelihoods and personal well-being cannot be conceived of simply in terms of direct food and income contributions. The relative contributions of urban agriculture vis-à-vis non-farming activities to household livelihoods as well as inter-linkages and trade-offs between them also varied over time and between households.

At the individual level, urban agriculture was valued by men more as a means of saving money on food expenditure that enabled them to use their often limited financial resources to meet other household obligations. However, livestock keeping was also a relatively important source of additional income, but more so for women. Urban agriculture, especially crop cultivation, provided the means with which women were more able to perform their gender roles and responsibilities (practical gender needs), and to gain social and economic empowerment (strategic gender interests). This was especially the case where urban agriculture leveraged their participation in social networks through which they were able to access financial credit.

The findings that urban agriculture generally catered for only a small portion of household food and income needs no doubt emboldens critics of urban agriculture policy advocacy who hold that the real significance of urban agriculture is

only speculative if not exaggerated, and that the practice is therefore not deserving of any special policy support (e.g. Webb 2011; Ellis & Sumberg 1998). However, for most of those who participate in urban agriculture, the activity's benefits, limited as they may seem, are clearly demonstrable and greatly valued. Moreover, as long as economic hardships of urban residents persist – characterized by falling incomes, declining purchasing power and rising food prices – own food production will remain an important strategy of improving their household food situations, even if only marginally. As has come to be recognized, following Amartya Sen, availability of food in the market does not necessarily translate into food availability at the household level for those who lack financial resources to establish entitlement over the food.

Moreover, it is now widely recognized in livelihood studies that poverty and well-being are better understood not just from the point of view of economic and material concerns, but from the totality of poor people's lived experiences and livelihood goals – including non-material and social concerns – as expressed by the poor themselves (Chambers 1995; Scoones 1998; Chambers & Conway 1992). If this is so, then the varied meanings that participation in urban agriculture give to the worlds of those participating in it (see Bebbington 1999), and more so in the case of women, clearly affirm the status of urban agriculture as a potentially important strategy for fighting urban poverty. In any case, urban agriculture's economic marginality and environmental and health risks associated with it are largely a function of poor regulatory regimes and lack of support. Moreover, besides the non-material benefits that accrued to urban farmers, urban agriculture was inter-linked and traded off with other income-generating activities in varied direct and indirect ways, the totality of which constituted household livelihood systems. Conceptually, this latter point highlights the need to adopt a broader and more holistic approach to people's livelihood response strategies – a point that is commonly emphasized but rarely taken up by livelihood studies (Brons *et al.* 2005).

Implications for policy

Recently, the Government of Kenya adopted the 'Sessional Paper No. 3 of 2009 on National Land Policy' and made public the draft National Urban and Peri-Urban Agriculture and Livestock Policy (UPAL) document. The two policy initiatives are aimed at regulating and supporting urban farming.

The Sessional Paper provides the most progressive and coherent national policy statement yet on urban agriculture. It is intended to "form the basis for, and (...) the overall guide to all other land-related policies" (Section 270) and a reference point for the review and harmonization of "land use planning functions of

(all) local authorities” (Section 255), including existing legislative frameworks for urban agriculture (Sections 254, 255, 270). Besides addressing a wide range of issues related to land that have a bearing on urban agriculture – e.g. land governance, management, utilization, access, equity, social justice, and tenure rights for various groups, including women, etc. – the Sessional Paper goes a step further. Not only does it recognize that “[U]rban agriculture has not been properly regulated and facilitated”, it lays down principles upon which it shall be carried out: (a) “promotion of multi-functional urban land use, and (b) putting in place an appropriate legal framework to facilitate and regulate urban agriculture and forestry” (Section 12).

As a planning concept, urban multifunctional land use (MLU) promotes intensification in the use of urban space by emphasizing the combination of diverse but synergetic and inter-dependent land uses in one area (see Vreeker *et al.* 2004). In the context of urban agriculture, this principle disabuses the notion that the activity does not belong in the city and that it is incompatible with other urban landuses. It also departs from the oft-preferred ‘zoning’ model (see for example Owusu 2007; Mireri *et al.* 2007) that proposes the designation of particular areas as farming zones while excluding agricultural activities from other areas designated for other land uses such as residential, industrial, recreational, etc. Based on the MLU model, a case could be argued, for example, in favour of promoting urban agriculture within (or in close proximity of) residential areas because of its predominantly subsistence nature, but also because of the existence of a ready market (for home consumption) for any surplus agricultural produce. Allowing urban agriculture within close proximity of their residences rather than zoning far away areas for farming would also tap into women’s labour and enhance their participation in the activity. This is because of women’s supposed ability to juggle between the various domestic chores and farming tasks (Bryld 2003; Mougeot 2000; Jacobi *et al.* 2000), especially where agricultural activities and products can be integrated into their other income-generating activities. Given their domestic-based reproductive responsibilities, women are usually excluded from off-plot farming activities due to distance and time-related constraints.

The MLU principle’s focus on maximization of urban space finds resonance in Section 109 (c) of the Sessional Paper which spells out that “the government shall (...) encourage development of underutilized land within urban areas”. To appreciate the importance of this provision one has to consider that many urban farmers in Kenya cultivate plots in open, undeveloped public and private spaces but under circumstances of great anxiety and uncertainty over precarious tenure rights and harassment by local authorities as well as landlords and their agents (see Foeken 2006; Dennery 1996; Freeman 1991). Furthermore, as a custodian of

some of the (undeveloped) public spaces, the government can actualize the provision by allocating such land for purposes of urban farming. It is particularly instructive that unlike in the past when bureaucracy, corruption and nepotism excluded the poor from benefitting from allocation of public land in Kenya's urban centres (see Musyoka 2004; GoK 2009), the Sessional Paper contains provisions that cushion poor urban dwellers, including women, against exclusion in the land allocation process. For instance, it spells out that public land shall be allocated "through public auctions except for land earmarked for the support of livelihoods in urban and rural areas" (Section 84, c). This means that the government can deliberately allocate land to the poor rather than open it up for competition through the public auction process that would in all likelihood favour those with ample financial resources. The position of the poor urban residents – and especially women – in respect of access to public land for urban farming is further augmented by the emphasis the Sessional Paper places on "equitable access to land in the interests of social justice" (Section 39, e).

As regards the second principle, namely "putting in place a legal framework to facilitate and regulate urban agriculture", it is expected that the legalization of urban agriculture will go a long way in removing anxiety among farmers about the official status and future of urban agriculture in general, and about possibilities of having their crops destroyed or, as in the case of pig farmers in Eldoret, their livestock baited by municipal authorities. It is expected that a supportive and facilitative legal and policy environment would constitute an important incentive for urban farmers to invest in urban agriculture, but also attract outside resources, innovations and technologies necessary for improving productivity, profitability and environmental sustainability (see Bryld 2003; van Beek & Rutt 2007).

The Sessional Paper also makes clear the need to balance between the benefits of urban agriculture with ecological and public health concerns. It highlights the need for land use plans that promote "orderly management of human activities to ensure that such activities are carried out taking into account considerations such as the economy, safety, aesthetics, harmony in land use and environmental sustainability" (Section 104, c). Ironically, it is such framing of the essence of spatial planning that has defined the restrictive policy and legal frameworks for urban agriculture in many African cities. As was observed in Chapter 2, anti-urban agriculture policies and official attitudes were invariably predicated on the activity's perceived marginality to the urban economy, public health and security risks as well as its supposed incompatibility with other more formal urban landuses. The inherent risks of the said section of the Sessional Paper in the particular case of Eldoret should be understood in light of persistent negative attitudes towards urban agriculture among officials of the municipal council. The Sessional Paper's

emphasis on public participation in the spatial plans preparation and development control processes “for all urban and peri-urban areas in the country” (Section 109. a.; 59.h), and on the democratization of, and consideration of public interest and stakeholder needs in land appropriation for public use potentially bodes well for urban agriculture in this respect (Sections 42-3; 51 b; 104 f; and 105 c). However, this does not in and by itself necessarily guarantee a favourable regulatory framework for urban agriculture.

It should also be noted, as evidence from elsewhere on the continent suggests (e.g. Mkwambisi *et al.* 2010; Mlozi 2003), that favourable national policy frameworks for urban agriculture will amount to nothing if concrete steps are not taken to translate them at the local level. In light of the prevailing negative official attitudes within the EMC, educational and advocacy programmes targeted at municipal officials should thus form an integral part of the implementation process. The purpose of such programmes should be to raise awareness among officials of the importance of urban farming for urban households, and of ways in which the practice could be integrated into urban planning in a manner that enhances the urban environment. The involvement of civil-society organizations and research institutions will be critical in this process. Such programmes have yielded positive results in Kenya’s Nakuru town (Foeken 2008), and in other urban centres in Sub-Saharan Africa (van Beek & Rutt 2007).

Effective implementation of the national policies at municipal level will also require improved coordination among various stakeholders in urban agriculture, including the EMC, relevant government departments, research institutions and civil-society organizations (including farmers’ organizations) operating in the municipality. And finally, greater participation by the farming community in the design and implementation of urban agriculture support and regulatory framework is imperative. The (aspiring) urban and peri-urban farmers must find a way of engaging and negotiating with urban authorities (and other stakeholders in urban land use planning) and articulating their interests in an organized and structured manner. This is best realized by farmers’ organizations, which are currently rare in urban centres in Kenya. Non-governmental and civil-society organizations can play an important role in raising awareness among farmers and organizing them and/or strengthening the capacity of farmers’ organizations as vehicles through which farmers can participate in the policy implementation process. As has been demonstrated elsewhere (see e.g. Brock & Foeken 2006), organized farmers’ groups could also play a critical role in enabling their members to access – through collective bargaining – farm inputs at affordable rates, extension services and new farming techniques and technologies, as well as markets and good prices for their produce. As shall be discussed below, participation of wo-

men in farmers' groups also offers them opportunities to network and build solidarity necessary for psychological support and collective action.

It is the proposed National Urban and Peri-Urban Agriculture and Livestock Policy (UPAL) – a draft of which was made public in May 2010 – that more specifically lays down policy guidelines and intervention measures for the support of urban farming.¹ The policy's broad objective is "to promote and regulate sustainable UPAL development to improve incomes, food security, create employment, enhance living standards and reduce poverty; while focusing on land use, public health and environmental management"(Section 2.1). This objective betrays a broad-based approach to urban agriculture planning aimed at harnessing its multiple functions within the broader context of sustainable urban development and city-wide food security.

At the household level, the policy addresses a broad range of constraints that many (would-be) urban farmers encounter, and environmental and health risks attributed to urban farming that typically provide the pretext for restricting its practice. The constraints – some of which were identified in Eldoret (see Chapter 7) as they have been in other urban contexts across sub-Saharan Africa – include lack of or inadequate access to farming resources such as land (and associated security of tenure problems), inputs, extension services tailored to the urban context, and appropriate urban agriculture technologies. Environmental and public health risks identified by the proposed policy document as requiring attention relate to unplanned disposal of urban agriculture waste, overuse of agrochemicals, cultivation of contaminated sites, use of untreated sewage, nuisance associated with marauding livestock, and transmission of zoonotic diseases. The policy outlines specific measures to address these challenges. The urban farmers' recognition of environmental and health risks associated with unregulated urban farming (see Chapter 5) augurs well for the regulatory initiative, the successful implementation of which will require environmental awareness and effective participation of urban residents.

Support for farmers to access farming resources as proposed in the policy (section 3.0) will be of particular significance. Especially for the poor and recent immigrants to urban areas for whom access to farming space is the most problematic (see e.g. Dennery 1996), intervention measures aimed at enabling urban residents to access land stand out. As for those already with some farming space, access to more land is essential for expanding and diversifying production. The question is what and how much the government and urban authorities can actually do to meet the predictably high demand for agricultural land – and whether it makes economic sense to do so – in a context of stiff competition from other

¹ The policy was developed jointly by the ministries of Agriculture, and Livestock Development.

competing landuses over the increasingly scarce land resource. Other measures that focus on improving productivity include the promotion of agricultural intensification through adaption of appropriate technologies, high value crops and livestock, and promotion of extension services. Such measures are particularly important given that the majority of farming spaces, especially home gardens, are typically small holdings.

By virtue of women's gender roles and, deriving from this, their control over the use of agricultural produce (especially crop and some livestock products), it could be assumed that any improved productivity will translate into improved household well-being and advance women's practical gender interests by enabling them to play their reproductive roles more effectively. As a result of this, and more so by generating income with which they can build social capital and use it as a basis for accessing financial capital, improved productivity would enable women to also enhance their contributions to household sustenance and asset building thereby raising their social status and voice at the household and community levels.

However, it must be borne in mind that since women provide the most labour, any increase in the scale of urban farming, without securing men's greater involvement in domestic responsibilities and/or in farming activities associated with or previously carried out by women, comes with the possibility of increased demands on their time and labour (see Hovorka 2006). This is more the case if the (extra) plot to be accessed is located at a considerable distance from the home. Yet greater involvement of men in urban agriculture activities – especially once such activities become more economically visible – may not necessarily benefit household well-being or serve women's interests. On the contrary, it may lead to men's withdrawal of budgetary support with income from non-farming activities, and/or undermine women's claims on the incomes derived from urban farming thereby reducing their space to maneuver with the income that may accrue to their labour. Unlike women's labour which contributed more directly to household well-being, men tended to privilege their own interests. And while adoption of some technologies may also lessen women's workload, improvements in agricultural productivity resulting from the use of such technologies has the potential of attracting greater interest of men in urban agriculture with a similar effect of eroding women's maneuvering space. It must be recalled that women's economic independence and autonomy was largely gained through concealment of incomes, which was made possible by men's under-estimation of the activity's economic value, and their regular absence from the home. As for the men who knowingly ceded to women control over the use of income as a means of safeguarding their own personal incomes, it is difficult to speculate whether or not they would continue to do so (and under what circumstances)

when and if productivity improved substantially. In other words, the challenge for gender planning in urban agriculture is to support urban agriculture in a way that lessens women's labour burdens and/or promotes more equitable sharing of labour between men and women, while at the same time enhancing their decision-making role in the use of agricultural produce and income. Interventions in favour of home-based agricultural activities that are critical to household food supply and that also earn some income, and over which women traditionally exercise greater control such as vegetable production, will be particularly beneficial. Among large livestock, support for dairy farming would most probably enhance more co-operative arrangements between men and women, improve household welfare (in terms of milk consumption), and derive equitable benefits for both men (in terms of saving on food expenditure) and women (in terms of economic independence) than, say, pig production.

Moreover, while women's access to agricultural extension services is important in terms of improving productivity and reducing their dependence on men (who may sometimes be un-cooperative) for the performance of agricultural tasks and access to knowledge and skills, it may in certain instances have adverse implications for women. If – as was apparent from many men's accounts – men took up certain tasks because of their perception that women were unable to perform them, then any extension services offered with men's knowledge that improves women's agricultural knowledge and skills in performing those tasks will annul men's rationale for performing the tasks. Thus, it may be argued that any attempt to bridge the gender knowledge and skills gap – e.g. through extension services – that does not simultaneously address the power asymmetry in relation to labour allocation may work to the disadvantage of women.

Ultimately, the empowerment potential of urban agriculture more generally is more probable when, as Hovorka (2006: 60) notes, "women's participation in urban agriculture comes out of choice rather than need". This will require that structural causes of poverty and gender inequalities are confronted. It was certainly the case that through their participation in urban farming, some women were able to renegotiate intra-household gender relations in their favour and to gain a voice at the household level. However, such women mostly preferred not to project such empowerment beyond their households in order to avoid harming the public image of their spouses as well as to retain their own respectable 'wifely' status in the community. (This reflects the cultural sanctions of gender inequalities operating at the extra-household or community level.) Thus, although individual women's agency may achieve emancipation at the household level, by remaining invisible in the public domain, the impact of such agency on the structural inequalities and women's conditions more generally remain limited (Kabeer 1999). Consequently, to improve the circumstances of women individually and

collectively, development programmes must aim at redressing gender inequalities at the community level as well, and should of necessity entail “collective solidarity in the public arena (besides propping up) individual assertiveness in the private” (*ibid.*: 457). In the context of urban agriculture, community gardening and farmer’s organizations can constitute important forums through which women can access support for agricultural production, build solidarity and a sense of community and, through conscientisation, engage in collective action to improve their conditions (see e.g. Slater 2001).

It should be pointed out, however, that while interventions in the public arena may be relatively easy to implement and/or monitor, it is more difficult at the level of the household, which, as Chant (1998: 19) observes “is widely seen as a ‘private’ as well as a ‘natural’ domain”. Moreover, external actors’ perceptions about women’s circumstances and prescriptions about the choices they ought to make may not necessarily cohere with women’s own values and the meanings they attach to their choices, or even be feasible in the contexts within which the women are situated (Kabeer 1999). It has been mentioned, for instance, that female farmers preferred to negotiate power relations silently and to avoid disrupting intra-household power relations, perhaps because acting contrary could be more costly given their lack of strong fall-back positions. Thus, policy interventions need to take cognizance of such sensitivities embodied in cultural structures operating at the extra-household level, and of the available possibilities and opportunities for exercising agency, if the activities that are subject of intervention are to have meaning for and be valued by the participants. It is noteworthy that the proposed UPAL policy proposes to “incorporate gender concerns in UPAL related development programmes; and (...) [to] develop and implement innovative programmes that enhance equity between men and women in UPAL production and marketing” (section 3.9.1). Hopefully the concerns discussed above, among others, will inform such programmes.

Besides the household and personal benefits that are likely to be gained from improved productivity of urban agriculture as envisaged by the UPAL policy interventions, it is also expected that such improvements would positively impact urban development more generally. In the particular case of food security, the sale of surplus food and improved incomes for farmers and other participants along the urban agriculture production chain will contribute towards city-wide food security. And whereas the policy’s proposal to “discourage informal marketing of UPAL products through establishment of designated food courts, cottage industries and mainstreaming them into formal marketing” (section 3.5.2) is aimed at aiding this process, formalization of marketing – to be augmented by stringent food handling and processing standards and guidelines – may end up stifling poor urban farmers’ participation in formal markets. It will also constrain

poor urban residents' access to food that would otherwise be more affordable and more easily available from informal markets within their neighbourhoods. This adds to the doubts about the feasibility and potential of urban agriculture as a poverty-alleviating strategy in light of the enormous resources required for its support as implied by the wide range of proposed intervention measures on the one hand, and the scarcity of resources and competing demands on the same, on the other hand. It does not help that some urban farmers themselves tended not to consider urban agriculture as an activity worth more serious attention and substantial investment, putting greater premium instead on other livelihood activities. While this may, by itself, have been a consequence of legal constraints and lack of support for and limited productivity of urban agriculture, such perceptions augment apprehensions about urban agriculture policy advocacy. Yet, the urban agriculture policy initiatives do not explore any possibilities for inter-linkages and enhanced synergies between urban agriculture and non-farming livelihood activities. For instance, what would support for urban agriculture mean for other livelihood activities, and for the direction of inter-linkages between urban agriculture and other non-farming livelihood activities within the household livelihood systems? And, by implication, would it not therefore make more economic sense and be more responsive to the felt needs of the poor to support livelihood activities chosen by them, if that is what their lived realities dictate?

Implications for research

A study based largely on home gardens or on-plot farming, such as this, provides only a partial picture of gender dynamics in urban agriculture. It misses out on other issues that play out in the context of off-plot farming (i.e. farming in public/open urban spaces) such as access to land and tenure (in)security, community organizing and collective action associated with community gardening, public health and aesthetic concerns, etc. These issues are central to debates about the sustainability of urban agriculture and, as such, to urban agriculture planning. Besides, while urban agriculture undertaken on people's own plots in most part falls beyond the purview of the municipal authority's planning regulations, open space farming is subject to direct surveillance of municipal authorities. Thus, exploring gender dynamics in both home gardening and open space farming is critical for gaining a more complete picture of the role of gender in shaping the functioning of urban agriculture. In particular, it will provide a better understanding of the role of the gendered private/public spatial division in (re)producing gender inequalities in the context of urban agriculture on which intervention measures at the household as well as the extra-household level can draw.

Similarly, greater attention should be paid to the trade-offs and inter-linkages between urban agriculture and other household livelihood strategies and the role of gender in this, if the real value of urban agriculture is to be better understood. Studies have tended to focus on urban agriculture as an isolated livelihood strategy without paying attention to the varied ways in which it impacts and is impacted by other livelihood strategies that together constitute household livelihood systems. At the policy level such information is essential for enabling planners to anticipate probable consequences of supporting urban agriculture on other livelihood activities and vice versa, and on overall household livelihood systems as well. It also enables planners to explore possibilities of targeting support for urban agriculture in a manner that enhances beneficial synergies between urban agriculture and other livelihood activities.

Whereas access to farming resources has been identified in the literature among important constraints that require policy attention, the findings of this study point to the need to pay greater attention to how men and women relate to, and the varied meanings they attach to, different farming resources, and the implications of different modes of establishing entitlement over such resources for their respective roles in urban agriculture, and for personal as well as household livelihood outcomes. As Kabeer (1999: 44) has pointed out, “if it is to be useful as a measure of empowerment, the ‘resource’ dimension has to be defined in ways which spell out the potential for human agency and valued achievements more clearly than simple ‘access’ indicators generally do.”

Attempts should also be made to gain more insights into the varied meanings of, and the value attached to agricultural work and to different agricultural tasks by men and women. This will help in understanding the continuities and changes, in the urban context, of the traditional agricultural division of labour and the gendered agricultural knowledge and skills. As with many studies on work (Jackson & Palmer-Jones 1999), analysis of division of labour in urban agriculture research has tended to overemphasize the relative ‘burdensomeness’ and time constraints related to men’s and women’s participation in urban agriculture and in the performance of specific agricultural tasks as a proxy for gender inequalities in well-being outcomes.

Lastly, urban agriculture research in sub-Saharan Africa has paid scant attention to the inter-generational dimension, which is in many ways intertwined with that of gender and integral to the sustainability of urban agriculture. This begs the question: if we should plan for the sustainability of urban agriculture into the future, shouldn’t we focus too on the role and contribution of the future farmers, i.e. young men and women?

Appendices

Appendix 3.1 Key issues and related diagnostic/data extraction tools

Form	Key issues	Sub-issues	Diagnostic tool
1		Household composition: Sex, age, marital status, education, employment status, ethnicity	
2	Importance of urban agriculture for farming households	Urban-rural linkages Farming activities undertaken by households	Gender benefits analysis
		Motives for participating in urban agriculture	Gender analysis matrix
3	Needs of men and women in urban agriculture	Benefits from urban agriculture Choice of farming activities	Gender decision-making matrix
		Personal benefits from urban farming	Gender benefits analysis
4	Contribution of men and women to urban agriculture and household livelihoods	Household participation in non-farming livelihood activities Performance of roles and tasks in urban agriculture	Gender activity analysis chart
		Household food security	Gender decision-making matrix
5	Constraints of men and women in urban agriculture	Problems faced by men and women in urban agriculture.	Gender resource analysis and mapping Gender problems analysis
		Access to farming resources (land, water, inputs, technical support, financial capital).	Gender resource analysis and mapping
6	Household poverty/welfare level	Household ownership of assets Access to amenities	Asset-based welfare index construction
7.	Legal and policy framework for urban agriculture	Physical conditions of dwellings Knowledge of municipal council policies on urban agriculture. Enforcement of municipal council policies. Perception of environmental and health risks of urban agriculture by urban farmers.	

Appendix 3.2 Demographic characteristics of respondents

Characteristic	No. of respondents	% of total
<i>Geographic distribution</i>		
Block 3	67	34
Block 4	133	67
Total	200	100
<i>Sex of respondent</i>		
Female	128	64
Male	72	36
Total	200	100
<i>Relation to household head</i>		
Female household head	31	16
Female spouse	95	48
Male head (conjugal)	62	31
Male head (single)	8	4
Other (son)	2	1
Other (daughter)	2	1
Total	200	100
<i>Respondents age (years)</i>		
>20 years	2	1
20-29	26	13
30-39	46	23
40-49	57	28.5
50-59	39	19.5
60-69	17	8.5
70 and above	13	6.5
Total	200	100
<i>Respondents' education level</i>		
No formal education	24	12
Up to upper primary	61	32
Secondary and above	108	56
Total	193	100
<i>Respondents' ethnicity</i>		
Kikuyu	100	50
Luhya	27	22
Kisii	43	14
Kalenjin	15	8
Luo	3	5
Kamba	9	1.5
Others	3	1.5
Total	200	100

Appendix 3.3 Principal component analysis descriptive statistics

	Mean	Standard deviation	Analysis N
vehicle/motorbike	.0938	.29240	160
bicycle	.4188	.49490	160
television set	.5000	.50157	160
radio	.7688	.42296	160
urban plot(s)	.4563	.49965	160
rural plot(s)	.2250	.41889	160
owner-occupied dwelling	.9438	.23113	160
cemented walls	.3688	.48398	160
cemented floor	.5125	.50141	160
access to electricity	.1313	.33873	160
access to piped water	.6688	.47214	160

Appendix 6.1 Crops grown by farming households in Langas

Crop	No. of households cultivating	% of total	Crop	No. of households cultivating	% of total
<i>Sukuma wiki</i> (kale)	97	61	Passion fruit	4	3
Maize	95	59	<i>Dhania</i>	4	3
Spinach	40	25	Carrots	4	3
Bananas	33	21	Pumpkins	3	2
<i>Suja</i> (black night shade)	28	18	<i>Saga</i> (spider plant)	3	2
Sugarcane	28	18	<i>Nderema</i>	3	2
Beans	24	15	Cabbages	3	2
Cowpeas	20	13	Green peas	1	1
<i>Nduma</i> (arrow roots)	17	11	Green peppers	2	1
Onions	16	10	Oranges	1	1
Avocados	14	9	Luguards	1	1
Tomatoes	13	8	Guavas	1	1
Irish potatoes	11	7	Sorghum	1	1
sweet potatoes	9	7	Cucumbers	1	1
Cassava	5	3	Mangoes	1	1

Appendix 6.2 Participation in non-farming livelihood activities (NFAs), by gender and type of household headship

	N	Men	Women	Male h'head	Female spouse	Female h'head	Other male	Male headed	Female headed
Landlord	59	44	15	44	3	12	-	47	12
Grocery	37	3	34	2	26	8	1	28	9
Hawking (general merchandize)	35	20	15	17	8	7	3	25	10
Casual employee	30	25	5	16	2	3	9	27	3
Artisanal/manufacturing	23	16	7	14	3	4	2	19	4
Regular employee	17	11	6	9	5	1	2	16	1
Retail trade (shop, kiosk)	11	3	8	2	6	2	1	9	3
Transport	10	9	1	9	-	1	-	9	1
Community service	4	4	-	4	-	-	-	4	-
Other services	4	1	3	1	1	2	-	1	2
Total	230	136	94	118	54	40	18	185	45

Appendix 7.1 Constraints faced by crop cultivators, by gender (%)

Problem/constraint	Total	Men	Women	Male head	Female spouse	Female head
N	176	68	108	65	84	23
<i>Resource access-related</i>						
High input costs	25	22	27	23	25	30
Labour shortage	10	13	8	12	7	17
Lack of money	8	6	9	5	7	22
Insecurity of tenure	5	4	5	5	5	4
Lack of access to water	5	6	4	6	5	-
Lack of farming skills	3	4	2	5	1	4
Low market prices	2	1	2	3	1	-
<i>Environmental/ecological</i>						
Pests and diseases	64	60	67	62	62	83
Insufficient/unreliable rainfall	19	21	19	22	19	17
Poor land quality	16	15	18	15	15	26
Water logging	2	1	3	3	10	4
<i>Social problems</i>						
Theft of crop	22	13	27	12	26	30
Destruction of crops	6	3	8	3	8	4

Appendix 7.2 Constraints faced by livestock-keepers, by gender (%)

Problem/constraint	Total	Men	Women	Male head	Female spouse	Female head
N	148	64	84	61	59	24
<i>Resource access-related</i>						
Lack of financial capital						
High input costs	16	13	18	11	15	21
Labour shortage	11	9	12	10	5	17
Poor market prices	6	9	4	5	3	8
<i>Environmental/ecological</i>						
Pests and diseases	75	63	82	62	80	88
Shortage of fodder/feeds	11	16	8	16	7	13
<i>Social problems</i>						
Conflict with neighbours	14	9	17	8	17	21
Theft of livestock	9	9	10	10	8	13
Predation	3	5	2	5	2	4

Appendix 9.1 Decision-making on choice of crops, by gender

Crop	N*	Men	Women	Joint
<i>FOOD CROPS</i>				
<i>Sukuma wiki</i> (kale)	104	17	53	30
Maize	91	27	31	33
Spinach	37	10	17	10
Beans	22	4	12	6
Cow peas	7	2	2	3
<i>Nduma</i> (arrow roots)	8	-	7	1
Onions	12	3	9	0
Tomatoes	10	3	4	3
Irish potatoes	6	-	6	-
Sweet potatoes	8	-	6	2
Pumpkins	2	-	2	-
<i>Saga</i>	1	-	1	-
Cabbages	2	-	1	1
Cassavas	4	-	4	-
<i>INCOME-EARNING CROPS</i>				
<i>Suja</i> (black night shade)	30	9	10	11
<i>Dhania</i>	5	3	-	2
Green pepper	2	2	-	-
<i>OTHER CROPS</i>				
Bananas	27	3	20	4
Sugarcane	26	4	17	3
Avocadoes	9	4	3	2
Passions	3	2	1	-
Oranges	2	-	2	-
Luguards	1	1	-	-
TOTAL	389	96(25%)	206(53%)	129(33%)

* The number of decision-making instances, i.e. the number of households cultivating the crop.

Appendix 9.2 Decision-making in consumption and sale of crop products, by gender

Crop product	Consumption				Sales			
	N	Men	Women	Joint	N	Men	Women	Joint
<i>FOOD CROPS</i>								
<i>Sukuma wiki</i> leaves	93	8	69	13	72	10	37	24
<i>Sukuma wiki</i> suckers	-	-	-	-	5	2	1	2
Maize grain	90	18	38	34	7	1	3	3
Spinach	30	9	16	4	25	7	15	3
Beans	14	2	2	8	2			2
Cowpeas	6	-	3	3	4	1	2	1
<i>Nduma</i>	8	-	7	1	2	-	2	-
Onions	12	2	9	1	5	2	2	1
Tomatoes	10	3	4	3	7	-	2	2
Irish potatoes	6	1	5	-	1	1	-	-
Sweet potatoes	8	-	6	2	-	-	-	-
Cassavas	4	-	4	-	-	-	-	-
Pumpkin leaves	1	-	1	-	-	-	-	-
<i>Saga</i>	1	-	1	-	-	-	-	-
Cabbage	2	-	2	-	-	-	-	-
<i>INCOME-EARNING CROPS</i>								
<i>Suja</i>	26	3	18	5	19	6	8	5
<i>Dhania</i>	4	3	-	1	4	2	-	2
Green pepper	2	-	-	2	2	2	-	-
<i>OTHER CROPS</i>								
Avocados	7	2	3	2	4	-	2	2
Passions	3	-	2	1	-	-	-	-
Sugarcane	23	3	13	6	6	2	2	2
Bananas	23	1	22	-	5	2	2	1
TOTAL	373	55(15)	225(60)	86(23)	170(46)	38(10)	80(21)	51(14)

Appendix 9.3 Decision-making on use of income from crops, by gender

Crop product	No. Sold	Male spouse	Female spouse	Joint
<i>FOOD CROPS</i>				
<i>Sukuma wiki</i> leaves	72	6	46	19
<i>Sukuma wiki</i> suckers	5	2	3	-
Maize grain	7	-	4	3
Spinach	25	3	19	3
Beans	2	-	-	2
Cowpeas	4	-	2	2
<i>Nduma</i>	2	-	2	-
Onions	5	-	2	3
Tomatoes	7	-	4	3
Irish potatoes	1	1	-	-
<i>Sub-total</i>	130	12	82	35
<i>INCOME-EARNING CROPS</i>				
<i>Suja</i>	19	4	6	9
<i>Dhania</i>	4	2	2	-
Green pepper	2	2	-	-
<i>Sub-total</i>	25	8	8	9
<i>OTHER CROPS</i>				
Bananas	5	2	2	1
Sugarcane	6	-	3	3
Avocados	4	-	4	-
<i>Sub-total</i>	15	2	9	4
TOTAL	170	22(13)	99(58)	48(28)

Appendix 9.4 Decision-making in use of livestock products, by gender

Crop product	Consumption				Sales			
	N	Men	Women	Joint	N	Men	Women	Joint
<i>Large livestock</i>								
Cow milk	30	6	11	13	20	6	6	8
Cow manure	-	-	-	-	4	2	-	2
Live cows	-	-	-	-	10	3	-	7
Sheep meat	22	5	4	13	-	-	-	-
Sheep manure	-	-	-	-	2	-	2	-
Live sheep	-	-	-	-	15	10	-	4
Goat meat	4	1	-	3	-	-	-	-
Live goats	-	-	-	-	4	3	-	1
Live pigs	-	-	-	-	9	5	-	4
Sub-total	56	12(21)	15(27)	29(52)	64	29(45)	8(13)	26(41)
<i>Small livestock</i>								
Chicken meat	43	8	17	18	-	-	-	-
Chicken eggs	42	5	28	9	17	-	13	4
Live chickens	-	-	-	-	18	3	8	7
Duck meat	15	3	5	7	-	-	-	-
Duck eggs	12	3	5	4	4	-	3	1
Live ducks	-	-	-	-	8	1	4	3
Sub-total	112	19(17)	55(49)	38(34)	47	4(9)	28(60)	15(32)
<i>Total</i>	168	31(18)	70(42)	67(40)	111	33(30)	36(32)	41(37)

Note: Figures in parentheses denote corresponding percentages.

Appendix 10.1 Responsibility for crops, by gender

Crop	N	Male household head	Female spouse	Joint
<i>FOOD CROPS</i>				
Sukuma wiki	104	19	66	9
Maize	91	22	55	9
Spinach	37	11	18	6
Beans	22	-	15	5
Cow peas	7	1	6	-
Nduma	8	-	8	-
Onions	12	2	10	-
Tomatoes	10	5	5	-
Irish potatoes	6	-	6	-
Sweet potatoes	8	-	8	-
Cassavas	4	-	4	-
Pumpkins	2	-	2	-
Saga	1	-	1	-
Cabbages	2	-	2	-
<i>INCOME-GENERATING CROPS</i>				
Suja	30	10	16	3
Dhania	5	1	2	2
Green pepper	2	-	1	1
<i>OTHER CROPS</i>				
Bananas	27	4	21	-
Sugarcane	26	4	20	-
Avocadoes	9	6	3	-
Passions	3	2	1	-
Oranges	2	-	-	2
Luguards	1	-	-	1
<i>TOTAL</i>	389	87(22)	270(69)	38(10)

Note: The figures in parentheses represent corresponding percentages. Where they do not add up to 100% in their respective rows in respect of decision-making and responsibility, it is either because of rounding or because the decisions were taken by, or it was the responsibility of, members of households other than the male household head or the spouse.

Appendix 10.2 Responsibility for livestock, by gender

	<i>N</i>	Men	Women	Joint
<i>Large livestock</i>				
Cows	36	12	13	10
Sheep	42	11	20	6
Goats	9	3	2	3
Pigs	14	4	6	3
Sub-total	101	30(30)	41(41)	22(22)
<i>Small livestock</i>				
Chickens	57	9	39	9
Ducks	21	1	17	3
Sub-total	78	10(13)	56(72)	12(15)
<i>Total</i>	179	40(22)	97(54)	34(19)

Note: Some percentages do not add up to 100% because household members other than the male household head and/or the female spouse also took decisions on the choice of livestock.

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