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A POLITICAL ECOLOGY APPROACH TO EXTRA-LEGAL RURAL LIVELIHOODS: A LESOTHO-BASED CASE STUDY OF CULTIVATION OF AND TRADE IN CANNABIS

Julian Bloomer

Thesis Submitted to University of Dublin, Trinity College, for the Degree of Doctor of Philosophy

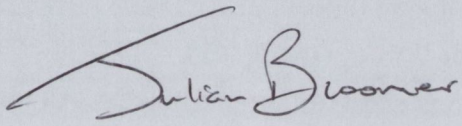
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SUMMARY

Rural livelihood strategies that in part comprise criminalised activities and hidden economies are an important, yet understudied, aspect of achieving economic diversification in many less developed regions. Drawing on frameworks developed in the fields of political ecology, marginalisation and vulnerability studies, as well as rural livelihoods and agrarian studies, this thesis examines cannabis cultivation and trade in Lesotho, as an extra-legal rural livelihood strategy. The findings are situated in the context of the severe socio-economic, political and environmental challenges facing rural communities in Lesotho. The term extra-legal is adopted in order to both highlight the active involvement of official authorities in the trade and the importance of recognising a criminalised network that stretches between formal and informal political and economic structures.

An important aspect of the project concerns an examination of how dependence on an extra-legal livelihood strategy influences several essential elements of rural life in Lesotho, including the ability to pay education costs, food sufficiency, ability to cope with shocks, and environmental factors, such as climate-induced stress and reduced soil fertility. Beyond this, the study aims to investigate how different political actors, such as the chiefs, local government and police interact with the trade, both in Lesotho and in South Africa, the principal destination for the vast majority of cannabis produced in Lesotho.

The research adopts a multi-strategy approach, where qualitative and quantitative methods are combined. The approach provides both a useful means of triangulation, as well as an in-depth and quantifiable perspective on issues relating to the cannabis trade in one community in Lesotho. Designing an appropriate methodology for researching extra-legal livelihoods was particularly important given the contentious debates that surround the research

of criminalised activities. The main qualitative aspect of the research involved a 12-month period of participant-observation in a rural community that was engaged with cannabis production. Quantitative data collection involved two crop surveys and a household survey that focused on demographic data, crop production figures, and income and expenditure data. Interviews with key informants, such as police officers, chiefs and politicians also provided important sources of information, and along with police statistics, were used to examine the political economy of the cannabis trade from Lesotho to South Africa.

The findings from the thesis clearly demonstrate the importance of cannabis as an extra-legal rural livelihood strategy, from both an economic perspective and from an agricultural perspective. Cannabis income was found to contribute approximately 27% of the total income in the community and was grown in the majority of households. Clear disparities were evident, however, between households in terms of production and income from cannabis. Income from cannabis was proportionately more important for poorer households than wealthier ones. Wealthier households tended to rely on non-farm income to a greater extent. Two of the principal challenges facing households dependent on income from cannabis were the seasonal fluctuation in market price and a decline in terms of trade. The thesis concludes that any drug control policies that attempt to reduce cannabis production in Lesotho will have a large and serious impact on a crucial coping strategy for marginalised rural households.

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ABBREVIATIONS AND ACRONYMS

A.D.	Anno Domini
AU	African Union
B.C.	Before Christ
C	Centigrade
C_3	Carbon-three
CFSAM	Crop and Food Supply Assessment Mission
cm	centimetre
CO_2	Carbon dioxide
DEA	Drug Enforcement Agency
DFID	Department for International Development (UK)
FAO	Food and Agriculture Organisation
Ha	Hectare
HIV-AIDS	Human Immunodeficiency Virus–Acquired Immunodeficiency Syndrome
INCB	International Narcotics Control Board
kg	kilogramme
LCD	Lesotho Congress for Democracy
LDC	Less Developed Country
LENA	Lesotho News Agency Online
LHDA	Lesotho Highlands Development Authority
LHWP	Lesotho Highlands Water Project
LMPS	Lesotho Mounted Police Service
LMS	Lesotho Meteorological Services
LVAC	Lesotho Vulnerability Assessment Committee
M	Maloti
m^2	metre squared
mamsl	metres above mean sea level
MDC	More Developed Country
mm	millimetre
MT	Metric ton
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organisation

NUL	National University of Lesotho
R	Rand (South African currency)
SACU	Southern Africa Customs Union
SADC	Southern African Development Community
SANDF	South African National Defence Force
SAPA	South African Press Association
SAPS	South African Police Service
SPSS	Statistical package for the social sciences
THC	delta-9-tetrahydrocannabinol
UK	United Kingdom
UNDCP	United Nations Drug Control Programme
UN	United Nations
UNGA	United Nations General Assembly
UNODC	United Nations Office on Drugs and Crime
USA	United States of America
WFP	World Food Programme

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Chapter 1: Introduction

Chapter 1 introduces the aims and objectives, as well as the research questions that underpin the project. A brief contextual background and a justification for the research are provided.

The illegal cultivation of cannabis in the southern African state of Lesotho has emerged as a key livelihood strategy that enables smallholder farmers to generate an income from their limited agricultural resources. Communities in rural Lesotho are faced with severe social-economic challenges, such as the fourth highest HIV-AIDS prevalence rates in the world (UNAIDS, 2006) and a drastic decline in traditional sources of cash income, in the form of remittances from South Africa-based mineworkers (IFAD, 2006). Many observers argue that rural society in Lesotho has entered a period of accelerated change that is characterised by increased social vulnerability and insecurity of livelihoods. Smallholder producers in many less developed regions in the world have frequently experienced increased social, economic, political, and physical marginalisation as a result of global economic integration. For many rural agrarian communities, adapting to changes in the economic and political landscape has meant that subsistence agriculture and wage employment must be combined in increasingly creative ways. Indeed, for many communities, such as former migrant labour reserve colonies like Lesotho, engagement in wage employment through migrant labour became the core economic strategy for rural households in the early twentieth century. In this context, subsistence agriculture became a form of insurance against unsuccessful engagement in the formal and informal wage labour economies. Without cash income, however, households are unable to access basic services or envisage a positive future. It is in this context that engagement with informal and hidden economies is playing an increasingly important role within rural communities in Africa. Yet research has tended to focus exclusively on urban informal markets, such as street trading, and avoided criminalised livelihood strategies.

The research draws on frameworks developed in the fields of political ecology, marginalisation and vulnerability studies, as well as rural livelihoods and agrarian studies. The focus of the current study is the cannabis trade in Lesotho as an extra-legal rural livelihood strategy, with a specific focus on the socio-economic, political and environmental context in which the livelihood strategy exists. The term extra-legal is adopted in order to highlight the active

involvement of official authorities in the trade and the importance of recognising a criminalised network that stretches between formal political actors, and those engaged directly in the cannabis trade. An important aspect of the project concerns an examination of how dependence on an extra-legal livelihood practice influences several essential elements of rural life in Lesotho, including the ability to pay education costs, food security, ability to cope with shocks, and environmental factors, such as climate-induced stress and reduced soil fertility. Beyond this examination the study aims to investigate the extent to which different political actors, such as the chieftainship, local government and police, are involved in the trade, both in Lesotho and in South Africa; the destination for the vast majority of cannabis produced in Lesotho. The four key research questions that underpin the research are: 1) What is the role and importance of the cannabis cultivation, as an extra-legal rural livelihood strategy, in the context of contemporary ecological, socio-economic and political factors in Lesotho? 2) How does participation in the cannabis trade influence income distribution? 3) How does the cannabis trade, as an extra-legal livelihood strategy, both incorporate and isolate different political and authoritative entities, such as chiefs and the police, in Lesotho? 4) How would a change in policies affect the sustainability of the cannabis trade and what would the consequences be for those dependent on the trade?

Chapter 2 presents the theoretical frameworks employed in the project. The frameworks developed in both political ecology and marginalisation studies are particularly useful for understanding the processes and impacts of socio-economic changes in rural Lesotho, and especially for investigating the cultivation of a cash crop in a marginalised environment. Political ecology has been increasingly refined as a tool to challenge the received wisdom dominating many environmental issues (e.g., Peet & Watts, 1996; Leach & Mearns, 1996; Bryant & Bailey, 1997; Watts, 2000; Forsyth, 2003; Zimmerer & Bassett, 2003; Robbins, 2004; Neumann, 2005). One particular focus of political ecology research has been an investigation of conservation policies in Africa and seeking to understand how communities living in affected areas have

dealt with the imposition of such policies (Neumann, 1998; Duffy, 2000; Brockington, 2002). By examining the historical reasons and current context of issues and seeking to explain the distribution of power between the various actors concerned, the political ecology approach can provide a more in-depth analysis of issues. Since much of the political ecology work has dealt with marginalised livelihood strategies, and cultures of resistance to the market and the policies of central government, it is particularly applicable to the study of extra-legal rural livelihood strategies, such as cannabis production.

Social vulnerability theories and approaches will also inform the research, and in particular examinations of the root causes of social vulnerability in rural Lesotho. Many models of vulnerability now exist. Some of the more relevant ones to this study include the pressure and release and access to resources models, both featured in Wisner *et* al (2004) and the various components of social vulnerability outlined in Anderson & Woodrow (1998). The use of such models, however, must be viewed in the context of warnings from Bankoff *et al* (2004) that aim to ensure that the concept is not oversimplified.

Chapter 3 provides a review of socio-economic, political and environmental conditions within Lesotho, followed by an examination of the political economy of cannabis in southern Africa. The remainder of the chapter addresses specific debates concerning the impact of labour migration on rural household economies in Lesotho, and the challenges that households in rural Lesotho face in the post-migrant labour system era.

The research methodology, outlined in Chapter 4, adopts a multi-strategy approach, where qualitative and quantitative methods are combined. The approach provides a useful means of triangulation, as well as an in-depth, yet quantifiable, perspective on issues relating to the cannabis trade in Lesotho. Designing an appropriate methodology for researching extra-legal livelihoods was particularly important and, it is hoped, the methodological framework adopted will make a positive contribution to the often-contentious debates surrounding research of criminalised activities. A wide range of literature was

consulted during the project, covering both theoretical aspects of the research, as well as methodological and contextual background material for the study area. Following the selection of an appropriate site, the main qualitative aspect of the research involved a 12-month period of participant-observation in a rural community that was engaged with cannabis production. Quantitative data collection involved two crop surveys and a household survey that focused on demographic data, crop production figures, and income and expenditure data. Interviews with key informants, such as police officers, chiefs and politicians, also provided important sources of information.

The village of Botsoapa was the site of the research and in Chapter 5 the village is introduced along with population data from the household survey. Results concerning cannabis cultivation in the village are presented in the early part of Chapter 6, and precede an initial analysis of the data from the household and crop surveys, combined with qualitative information obtained from informal and key informant interviews.

In Chapter 7 the focus shifts from Botsoapa to investigating the larger political and economic environment in which the cannabis trade functions in Lesotho and South Africa. Analysis of secondary police statistics and information gathered from key informant interviews with both South African and Lesotho police, as well as smugglers engaged in cannabis trafficking, reveals the inner workings of the cannabis trade.

Chapters 8 and 9 attempt to address the four research questions posed by drawing together the findings from the research and situating them in a wider geographical and theoretical context. Dealing with the first three research questions, Chapter 8 begins with a specific focus on issues relating to cannabis production in Lesotho, such as environmental degradation, food security and the cannabis economy. While there is a dearth of literature associated with these issues and drug production, cash crops in general have received a lot of attention and this literature is drawn on extensively in order to assess the applicability of the findings from the project to other contexts. The remaining sections of the chapter deal with issues surrounding local governance, policing,

and corruption. Chapter 9 deals with the fourth and final research question concerning the livelihood implications of policy changes on the cannabis trade in Lesotho, before elaborating on the broader theoretical potential for an increased role in critical political ecology and the research of extra-legal livelihoods. Finally, Chapter 10 presents the conclusions from the study and briefly suggests future areas of research relating to both the cannabis trade and extra-legal livelihood strategies more generally.

Chapter 2: Political ecology, vulnerability and rural livelihoods

In order to understand the evolution of the theoretical framework that this research project is situated in this chapter will examine developments in the field of political ecology, vulnerability studies and rural livelihoods whilst placing them in the context of extra-legal livelihood strategies.

2.1 A political ecology framework: origins, themes and criticisms

The contemporary field of political ecology resulted from the convergence of an array of theoretical branches that overlapped social studies and physical sciences. From cultural ecology to natural hazard theory to environmental history, there was a growing recognition towards the end of the 1970s and in the 1980s of the limits of supposedly objective explanations of phenomenon ranging from environmental degradation (Blaikie & Brookfield, 1987) to the impact of natural hazards (O'Keefe *et* al, 1976; Wisner *et al*, 1976; Cuny, 1983; Hewitt, 1983). These various branches were supported by a supply of empirical studies that were consistently demonstrating that the interface between nature and society was fundamentally and completely a social and political construct rather than an interaction that was open to scientific analysis and its subsequent prescriptions.

Important simultaneous shifts were also underway within the discipline of ecology and theoretical advancements in this discipline over the past three decades have also assisted in facilitating a closer interaction with a developing political ecology. Growing suspicion and disillusionment with equilibrium ecology and notions of carrying capacity and stable, harmonious ecosystems led to the rise of a new or non-equilibrium ecology which called for a radical revision of existing ecological theory and urged the discipline to "accept nature for what we are able to observe it to be, not for what we might wish it to be" (Botkin, 1990: 130). Such a shift in thinking enabled more stimulating debate to occur over nature and society interactions. This is particularly evident with regard to natural resource management and the implications for policy of adopting a non-equilibrium perspective (Tiffen *et al*, 1994; Neumann, 2005:67) and this will be discussed later with reference to the deconstruction of conservation policies.

Often flavoured with a Marxist perspective and heavily influenced by postcolonialism, political ecology brought the wider field of political economy into the analysis of human-environment interactions in order to challenge prevailing Malthusian perspectives and technocratic solutions, a contest that

continues to the present. The trans-disciplinary origins of political ecology remain evident, especially in the areas of anthropology (Paulson & Gezon, 2005), geography (Bryant & Bailey, 1997; Watts, 2000; Zimmerer & Bassett, 2003; Robbins, 2004; Neumann, 2005), environmental science (Forsyth, 2003) and environmental justice (Low & Gleeson, 1998). The scope of political ecology arguably extends much further, even encompassing projects that may not label themselves explicitly as such. Wainwright (2005) argues that such non-labelled research can accomplish what is most fundamental to political ecology when he refers to two very different publications - Raffle's (2002) account of the natural history of the Amazon, *In Amazonia*, and Gregory's (2004) polemic against the hegemony of the United States of America in global politics, *The Colonial Present*. If we understand political ecology "not as a *research framework*, but as an *anti-disciplinary* project: [these studies] call into question the constitution of the world as such – its spacing – in ways that allow us to think radically about the politics of nature" (Wainwright, 2005:1041 – emphasis in original). The recognition of such research, that intermingles with 'mainstream' political ecology, is summed up well by Taylor when he says that "notwithstanding appearances, we are all doing something like political ecology" (Taylor, 1997 cited in Watts, 2000:271).

The guiding objective of political ecology has been to "understand the complex relations between nature and society through a careful analysis of what one might call the forms of access and control over resources" (Watts, 2000:257) and the implications of such for both the well-being of the environment and humans, with a particular focus on sustainable livelihoods. In what is now widely recognised as the first comprehensive attempt to develop a methodology and theoretical basis for political ecology, Blaikie and Brookfield (1987:17) defined the framework as combining "the concerns of ecology and a broadly defined political economy". The focus on access and control over resources was evident from foundational political ecology writings such as Watt's (1983) *Silent Violence*, his seminal examination of recurrent drought in northern Nigeria and the underlying factors that led to increased vulnerability in

peasant societies – factors not resulting from a backwardness or cultural maladaptation but rather as a result of how pre-capitalist modes of production were interconnected to the global capitalist system in the colonial era.

Watt's study, along with others that focused on topics from deforestation (Hecht & Cockburn, 1989; Peluso, 1992a; 1992b) to soil erosion (Blaikie, 1985; Blaikie & Brookfield, 1987), also highlighted another key aspect of political ecology, namely the politics of scale. The ability to identify actors whose actions ranged from the local to national to global levels, and also to assess their role with the particular subject being examined, is a key feature that political ecology inherited from political economy. Indeed in their opening to *Third World Political Ecology* Bryant and Bailey (1997:2) suggest that a useful way to explain the meaning of political ecology is as "an analysis of the political interests and actions of the various actors that participate in political ecological conflict in the Third World". Researchers have theorised on how to adopt a political ecology framework at these various levels, from the household (Zimmerer, 2004) to the nation state during conflict (Uvin, 1996). The predominant focus of political ecologists has historically been on rural communities in Less Developed Countries (LDCs) and, although this trend persists, there is a growing recognition of the role that the framework could play in both urban and (More Developed Countries) MDC settings (McCarthy, 2005; Neumann, 2005; Schroeder, 2005; Schroeder *et al*, 2006). This focus on rural areas in LDCs stemmed from the concerns and predispositions of early political ecologists and highlights once more the importance of anthropology and cultural ecology in the formation of the framework. It is important to remember, however, that this was rather a reaction to "the perceived apoliticism" (Bryant & Bailey, 1997:13) of much work in these two areas rather than any linear progression.

Before examining the various themes that political ecology has focused on, it is worth noting a final feature of political ecology. Activism in one form or another is closely associated with practitioners and preachers of political ecology, although how much research translates into activism is debatable. A

decade ago Bryant and Bailey noted, "political ecologists tend for the most part to describe problems rather than prescribe solutions" (1997:195). According to another much more recent comment from a member of the field, this problem persists as political ecology "remains largely inward-looking, directing much of its attention to scholarly debates within the academy" (Walker, 2006:383). Indeed the very fact that the field is critiquing power play at all scales of governance can make the task of activism a selective one; but that should not be a justification for inaction.

Robbins has formulated two perceptive labels for how political ecology research operates where he describes the research as being either "a hatchet" (2004:12) or "a seed" (2004:13). In the former, research, as critique, strives to uncover faults in prevailing discourse on the environment, especially challenging the narratives espoused by states, corporations and international institutions and their policies that can have negative impacts at the local level and amongst marginal groups. As a hatchet the research aims to demonstrate that certain social and environmental conditions are "the contingent outcomes of power and not inevitable" (Robbins, 2004:12). Political ecology as a seed operates primarily through a focus on issues of equity and sustainability. Here the research "seeks to document the way individuals cope with change, households organize for survival, and groups unite for collective action" (Robbins, 2004:13). The latter should not be seen as evidence of a retroactive and regressive association with romantic notions of earlier agrarian idylls, but rather as research that seeks to understand where alterations occurred and assesses the impact that such changes have for future sustainability. Wallerstein (2007:380) concludes, with reference to environmental history and political ecology, that:

> "scholars/scientists are constantly adjured to leave these political judgements to others – politicians, specialists, citizens. But of course we are all citizens, and we are all in fact specialists in something (usually something relevant). Leaving these judgments

to others means endorsing de facto what these others do, even if we think in fact that it is in error".

While political ecology has traditionally focused on rural communities in LDCs, links with international political economy have been established and the scope of the subject now include the spectrum of nature-society interactions. Robbins (2004:14) identifies four themes of political ecology: environmental degradation and marginalisation; environmental conflict; conservation and control; and environmental identity and social movements. In all of these themes political ecology has established linkages between local issues and the global political economy.

The theme of environmental degradation and marginalisation is discussed in more detail in section 2.1.2, but there are a few points to make here on this crucial theme that has been one of the foundations of the field. Early works in political ecology focused on issues such as degradation of Sahelian grasslands (Watts, 1983), soil erosion (Blaikie, 1985; Blaikie & Brookfield, 1987) and deforestation (Hecht & Cockburn, 1989; Peluso, 1992a; Peluso 1992b) – all forms of environmental degradation. These studies focused not on the symptomatic expressions of such degradation that had been the purview of dominant apolitical narratives, but rather on the underlying causal factors. The search for these causal factors frequently led back to colonial policy and the articulation of pre-capitalist modes of production with the global capitalist economy. In seeking these root causes not only did researchers have to contend with histories that habitually exalted the colonial record, they also faced the resistance of contemporary environmental orthodoxies. Political ecology has been successful in challenging these orthodoxies, at least in scholarly debates if not always in policy making. Blaikie and Brookfield (1987:243), in attempting to confront orthodoxies in the area of soil degradation, made the comical yet sagacious remark that "one farmer's soil erosion is another farmer's soil fertility". Leach and Mearns (1996) compiled a collection of works that offered a fierce critique on much received wisdom that

prevailed on the African environment, exposing the true impact of colonial policies and imported scientific notions, as well as the development industry in the postcolonial era. The received wisdom in areas such as, for example, range management policy (Quinlan, 1994; Scoones, 1996) and soil erosion (Blaikie, 1985; Blaikie & Brookfield, 1987; Showers, 1989; Beinhart, 1996; Stocking, 1996; Driver, 1999; McCann, 1999; Forsyth, 2003:30) frequently blamed poor farming practices and customary law as the causal factors leading to degradation of rangelands and croplands. As noted by many commentators, however, it is often essential for the power elites, whether they be central government, the development industry or transnational companies, to maintain received wisdom and perpetuate the idea that local inhabitants cannot look after their own resources (Leach & Mearns, 1996; Bassett & Zuéli, 2003; Robbins, 2004). The maintenance of such perceptions justifies the control of resources by power elites.

The blaming of smallholder subsistence farming practices for environmental degradation had been challenged in a more practical way by some development agencies and practitioners since the 1980s. Chambers (1983) was at the forefront of this challenge. In his subsequent publications, Chambers (1989; 1994a; 1994b; 1994c; 1997) created and developed a methodology, participatory rural appraisal, which aspired to facilitate bottom-up development. Chambers and supporters of the method have not been without their critics, and Cooke and Kothari (2001) questioned whether the method merely reinforces the existing power imbalances under a new guise, rather than being the radical shift that it is presented as. This shift was later mirrored in academic circles by the rising number of projects that were examining so-called indigenous knowledges, especially in the area of biodiversity conservation and natural resource management (Berkes, 1999; Briggs *et al*, 1999; Agrawal, 1995). When such topics have been adopted in the past those studying them have frequently placed them above reproach. Indigenous knowledge is one example of this. Some have noted that there is "a danger of over-valorizing indigenous knowledges" (Briggs *et al*, 1999:101; see also Forsyth, 1996) while

Adams (1996:155) goes further to suggest that indigenous knowledge "has become a received wisdom in development thinking".

Given that political ecology research was examining power relations between actors, in order to understand environmental degradation, a logical progression from this was to extend the framework to investigating environmental conflict. A catalyst to the development of this theme was the dominance of Malthusian narratives at international policy level that was gaining further momentum with the rise of the environmental security school. Although presented in a slightly more sophisticated argument, the contemporary neo-Malthusians who led the environmental security school maintained the fundamental position that resource scarcity, coupled with overpopulation, acted as a direct causal mechanism of armed conflict and war. The principal architect of this school was Homer-Dixon (1991; 1994; 1999) who, along with others such as Kaplan (1994), has wielded significant influence within policy-making circles in the United States in recent years (Neumann, 2005). Peluso & Watts (2001) directly challenged the dominance of the environmental security school, with one contributor noting that a key failing of the environmental scarcity model, in fact, is its neglect of larger economic and political factors that profoundly affect local communities and conflicts (Hartmann, 2001).

Political ecologists have been engaged in challenging the scarcity model. Uvin (1996), for example, questions the notion that resource scarcity was the fundamental component leading to the Rwanda genocide in 1994 and studies of the role of minerals and gemstones in west and central Africa (Le Billon, 2001a; 2001b; 2003; 2004; Silberfein, 2004) and timber in Southeast Asia (Le Billon, 2000; Ross, 2001) investigate links between conflict and natural resources. More recently, there have been attempts to integrate debates occurring within political ecology and other disciplines, to create theoretical frameworks for examining distribution conflicts. Escobar (2006:120) proposed an integrated framework that he calls, a "political ecology of difference". The framework combines current trends in political ecology, politics of place, and cultural geography, to examine difference from the perspective of economic, ecological,

and cultural distribution conflicts. Bohle and Fünfgeld (2007) have noted that political ecology requires a sound conceptual approach for analysing how violence that has its origin in political conflict induces environmental and social change. Based on examples from Sri Lanka, they propose that theoretical frameworks from conflict studies in political ecology, and more recent approaches in livelihoods research, be drawn together to examine processes of disentitlement and social vulnerability.

The third theme identified by Robbins (2004) is conservation and control. Issues surrounding access to resources have already been highlighted as a key feature of political ecology. The theoretical development of the access to resources model will be discussed in more detail in section 2.1.2 on marginalisation but access to and control over resources was highlighted in a series of key political ecology studies at the turn of the millennium (Neumann, 1998; Duffy, 2000; Brockington, 2002; Neumann, 2003). Based in various African settings these researchers explored the role of a Western ideal of wilderness and preservation of biodiversity in "omitting histories of residents or by labelling their activities as inappropriate or damaging" (Brockington, 2002:47) and thereby "imposing wilderness" (Neumann, 1998) and excluding people who had been dependent on the land with the creation of national parks. The concept of designated wilderness areas dates from the 1860s and the establishment of Yellowstone National Park in the United States where residents, this time indigenous groups, such as the Crow, Shoshone and Blackfeet, were similarly excluded from the land they had utilised for centuries (Neumann, 2005:130). Nevertheless, colonial notions of preserving wilderness, or at least preserving it for a particular group of users, had a significant impact on the lives and livelihoods of many African communities. Such Western notions of wilderness were maintained in the postcolonial era by MDC-based and funded environmental organisations that have led to labels such as "eco-imperialism" (Bryant & Bailey, 1997:63) being proposed as an environmental equivalent of neo-colonialism. Neumann (2003:252) recognises that "ultimately, in agrarian societies, control over nature equates to control over

people" and this explains continuing conflictual relationships between people and protected areas and the authorities who manage them.

What is important to recognise with regard to this particular research project is the contribution made by these studies of conservation and control of resources to the understanding of extra-legal livelihood strategies. They demonstrated a capacity for revealing the crucial importance of formerly legal livelihoods strategies that were now a hidden and clandestine part of their livelihood portfolio. Chayanov's (1986) development of the peasant society's moral economy in the early twentieth century and the addition of the theory of everyday resistance (Scott, 1985) are particularly suited to uncover the "motivations, intentions and politics in everyday peasant life" (Neumann, 1998:42). The former theory postulates that due to the inherent risks of subsistence production "social systems of mutual assistance and tolerable exploitation" (Robbins, 2004:55) are created in order to allow a degree of flexibility in the system, should subsistence production fail. The second theory, of everyday resistance, is more self-explanatory and highlights the variety of methods such as the flouting of prohibitions and stealing that peasants engage in and adopt to resist external control. In his examination of Meru response to exclusion, from what is now Arusha National Park, Neumann (1998) documents the various livelihood strategies employed by people to cope. Strategies range from the legal (such as intensifying agricultural production and migration) to the illegal (such as grazing, cultivation and settlement within the park boundaries to poaching of protected wildlife). Given the strain placed on residents' livelihoods violations of these laws that exclude and prohibit the use of land are often seen as morally justified (Neumann, 1998).

The final theme that Robbins (2004) noted was that of environmental identity and social movements. It is also the most recently developed within political ecology, and represents a combination of both researchers' interests in the politicisation of the other themes they have been examining as well as a motivation to politicise political ecology. It also serves as a pre-emptive answer to Wallerstein's call-to-arms mentioned earlier. The pace of change within this

area is evident when the first and second editions of Peet & Watts (1996; 2004) are compared and how the development of networks such as the World Social Forum and the availability of improved information technology and communications continue to encourage the rise of social movements in LDCs and enhance linkages between LDCs and MDCs. Emboldened by the work of networks such as the international peasant movement, *Via Campesina*, rural movements in South America, Africa and Asia are responding and organising themselves to address the negative impacts that structural adjustment and the wider neo-liberal global capitalist economy have had on local livelihood strategies (Moyo & Yeros, 2005).

The themes discussed above are, of course, interconnected. For example, conservation policies have resulted in conflict and the militarisation of national park management (Neumann, 2004). Aside from the four themes highlighted, it is important to note that gender has also been a vibrant crosscutting theme in the evolution of political ecology, with input from feminist development studies. Other important areas where research has been taking place are disaster studies (Enarson, 1998; Fordham, 2004) and natural resource management (Cleaver, 2000).

Political ecology research has included gender as a potential variable in assessing ability to access and control resources as well as to highlight how environmental discourses can prove exclusionary (Rocheleau *et al*, 1996; Rocheleau & Edmunds, 1997). Based on research in Indonesia and West Africa, Schroeder and Suryanata (1996) illustrated how male fruit tree growers were able to exclude food crop production based on environmental policies advocated by the state and encouraged by development organisations in favour of cash-crop production dominated by men. Similarly Grossman (1993; 1998), in his study of banana exports in the Caribbean, highlighted a decline in the level of control that women were able to exert over household food and cash income. Rocheleau *et al* (1996:4) summarises the role of feminist political ecology, where gender is treated "as a critical variable in shaping resource access and control, interacting with class, caste, race, culture, and ethnicity to

shape processes of ecological change, the struggle of men and women to sustain ecologically viable livelihoods, and the prospects of any community for 'sustainable development'".

No theoretical framework is accepted by all and before concluding this section it is important to evaluate some of the criticisms that have been levelled at political ecology from both inside and outside the field, and what has been done to address these issues or reply to the criticisms. As a self-classified radical field of research, political ecology is engaged in continual debate over the theoretical framework, methodology and aspirations of the field. Indeed many of the criticisms of the field are voiced from within political ecology. It has already been noted earlier how some commentators have criticised political ecologists for not engaging with policy making more successfully, especially given its stance as a field advocating radical change.

As mentioned already, political ecology studies have focused to-date primarily on rural agrarian societies in LDCs. Some have argued that this has led to an exaggerated emphasis on local activities at the expense of regional and global developments (Bryant & Bailey, 1997). Critics from outside the discipline have derided an assumption that external political influences from the wider political and economic systems are important. In one of the most poignant critiques of the field, Vayda and Walters (1999) described this phenomenon as being a prescription for question-begging research. So while the early years of political ecology were seen as lacking a serious treatment of politics (Peet & Watts, 1996; Bryant & Bailey, 1997; Escobar, 1999; Watts, 2002), by the late 1990s Vayda and Walters (1999) declared that a reversal had occurred over the previous three decades, with political ecology going through a transition from ecology without politics to politics without ecology. In reply to the criticisms raised by Vayda and Walters (1999), several papers were presented at the annual American Anthropological Association in 2000 and subsequently published in a special issue of *Human Organization*. Introducing the special issue, Paulson *et al* (2003:213) noted that the papers provided "relevant examples of the workings of power on multiple scales and in multiple contexts,

developing an understanding of politics that goes beyond institutions of governance to encompass struggles over human practice, meaning and representation in relation to the environment". The authors did concede, however, that a more nuanced approach to defining the relationships between politics and the environment was required as well as methods to discover these relationships and subsequent ways to apply the findings for a practical outcome. In a related vein, Robbins (2004) has advocated a shift away from linear chains of explanation towards networks and such a position would necessitate a departure from *a priori* assumptions about the role of the wider political economy. Such a shift does not have to mean abandoning the political but rather expanding out from the research issue rather than assuming direct linkages in advance.

Finally it is worth remembering that in its haste to challenge narratives political ecology often created its own orthodoxies in reaction. Frequently romanticised as the basis of governance, the community is often described as an undifferentiated unit that speaks with a single voice (Watts, 2000). Nothing, of course, could be further from the truth. More refined criticisms have emerged in the development and disaster studies literature where practical projects have realised consistent failure in implementation over the years as a result of assuming unity at the level of community.

2.2 Marginalisation and vulnerability

The concept of marginalisation as used in political ecology originated in the critical development studies of the 1970s, when authors such as Meillassoux (1974) adopted a neo-Marxist, postcolonial approach to assessing the impact of neo-colonial exploitation in the periphery. The concept is closely linked to that of social vulnerability, which was being identified at the same time by commentators in disaster studies (e.g., Wisner *et al*, 1976; O'Keefe *et al*, 1976; Torry, 1979). Vulnerability provided a framework to conceptualise interactions between environmental change and human activities. The two concepts of vulnerability and marginalisation are coupled and differ primarily on

the scale in focus. O'Keefe *et al* (1976:567) declared that reducing "the vulnerability of a population to future disaster can only be done successfully through an understanding of the marginalisation process". Rather then than focusing on the magnitude of extreme environmental phenomena, such as drought or an earthquake, the important step was in recognising vulnerability of the population as the real cause of disaster (O'Keefe *et al*, 1976).

Marginalisation is a combination of ecological, political and economic circumstances that forces communities and their environments into a more uncertain and precarious alliance, leading to increased social vulnerability as well as accelerated environmental degradation. In summing up the very important contribution that Blaikie & Brookfield's (1987) *Land Degradation and Society* made to political ecology, Robbins (2004:77) states that:

> "Marginalisation...is a process whereby politically and socially marginal (disempowered) people are pushed into ecologically marginal (vulnerable and unstable) spaces and economically marginal (dependent and narrowly adaptable) social positions, resulting in their increasing demands on the marginal (increasingly limited) productivity of ecosystems...The result is a degraded landscape that returns less and less to an increasingly impoverished and desperate community – a cycle of social and environmental degradation."

This was the process of marginalisation that had been witnessed by Meillassoux (1974) and Watts (1983) in the Sahel, and by O'Keefe *et al* (1976) in the slums of Guatemala City. Political ecologists then forged the link between these three aspects of marginalisation (ecological, political and economic) and, through empirical research, were able to demonstrate how they were mutually enforcing (Blaikie & Brookfield, 1987).

Let us examine the roots of these three stands of marginalisation in more detail. From classical economics they incorporated Ricardo's identification of the economic margin as the point at which the cost of bringing additional inferior land into production is just met, but not exceeded, by the income gained from

that production (Neumann, 2005). With regard to ecological marginalisation they drew on notions of biophysical limits to the geographic range of particular species. Finally, from economic marginalisation, they brought neo-Marxist perspectives on the roles of economic growth and under-development. These perspectives, propounded in the centre-periphery model of development or dependency theory, view economic growth and development as being inherently unequal across social groups and geographic regions. The peripheries serve as permanent zones of extraction. In his in-depth historical analysis of nineteenth century India and China, Davis (2001) demonstrates the converging marginalisations at that period and correlates the titanic famines that ravaged parts of South America and East and South Asia with El Niño events as well as political and economic developments. One of the conclusions that Davis (2001) reaches in his intercontinental study is that the commercialisation of agriculture in the *sertão* in Brazil, as in north China, had less to do with seedlings of rural capitalism than with increased social and ecological marginality.

Debates on human vulnerability have continued to be focused in the realm of disaster studies and it remains one of the key concepts in formulating theory on disaster mitigation and prevention. Vulnerability can be defined as that which represents "the physical, economic, political or social susceptibility or predisposition of a community to damage in the case of a destabilizing phenomenon of natural or anthropogenic origin" (Cardona, 2004:77). Blaikie *et al* (1994) and Wisner *et al* (2004) propose two models of vulnerability, the pressure and release model (Fig. 2.1) and the access to resources model (Fig. 2.2).

Through the models, the authors demonstrate how vulnerability can be increased (the pressure) as well as decreased (the release) based on underlying root causes that contribute, through dynamic pressures, to unsafe conditions that lead to the increased vulnerability of a population and increased impact when a hazard occurs. This particular model of the progression of vulnerability provides a very useful illustration of the importance in identifying

root causes to particular problems, and has been useful not just in disaster studies but also in areas such as environmental history.

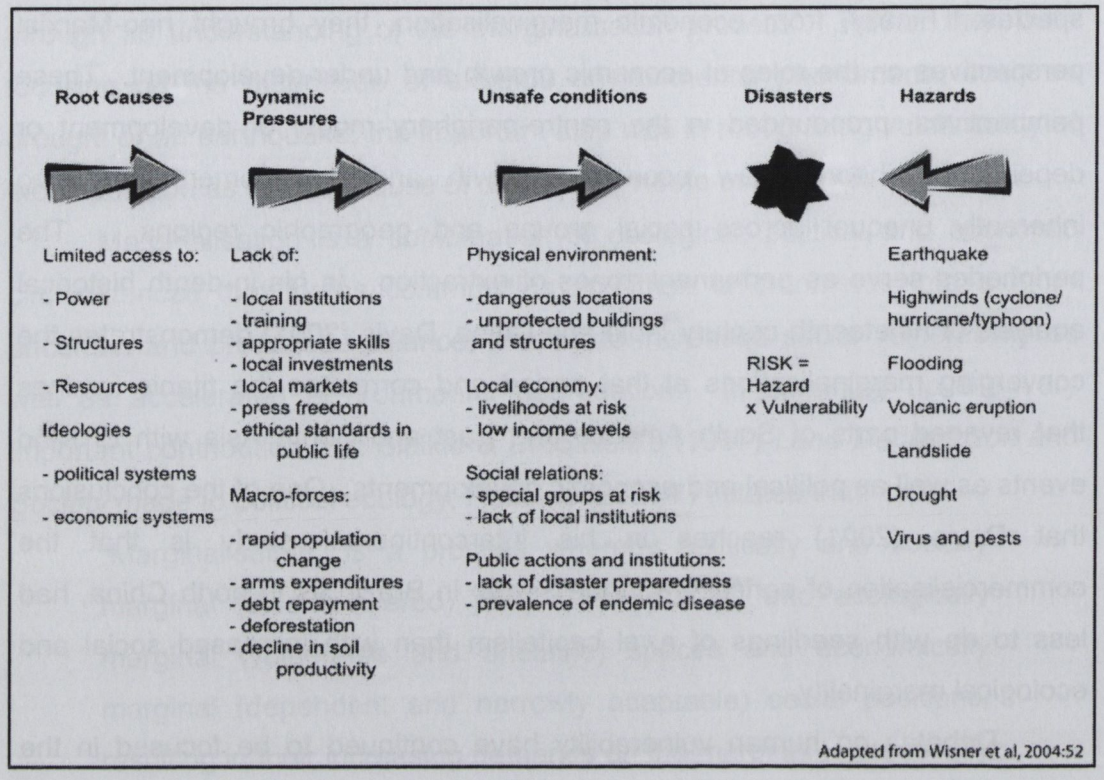


Fig. 2.1 The progression of vulnerability

The access to resources model focuses on vulnerability at the household level, incorporating the characteristics of the hazard and the role that other factors such as social relations and coping mechanisms play in increasing or decreasing a household's vulnerability. While the concept of vulnerability was developed within the context of natural hazards and resulting disasters, the concept soon included so-called human-made disasters.

Within the context of the research that will be presented in this dissertation, the concept of vulnerability has much to offer a more nuanced understanding of the situation in which the research is based. As will be shown later in the case of Lesotho, the HIV-AIDS epidemic has had an enormous impact in southern Africa as in other parts of Africa. If the epidemic is conceptualised within the framework of vulnerability studies then the impacts of

the epidemic can be demonstrated to increase the vulnerability of the population in a whole array of areas, such as agriculture, provision of public services and in maintaining industrial sectors, for example. In southern Africa, where environmental vulnerabilities are already being keenly felt as the region enters its seventh consecutive year of drought (IRIN, 2007), these cumulating conditions or "composite catastrophes" (Moseley, 1999; 2002) serve to increase vulnerability. Indeed De Waal and Whiteside (2003) opine that the HIV-AIDS epidemic was the primary cause of the widespread food shortages that many households in southern Africa have been experiencing in recent years, referring to the phenomenon as the "new variant famine".

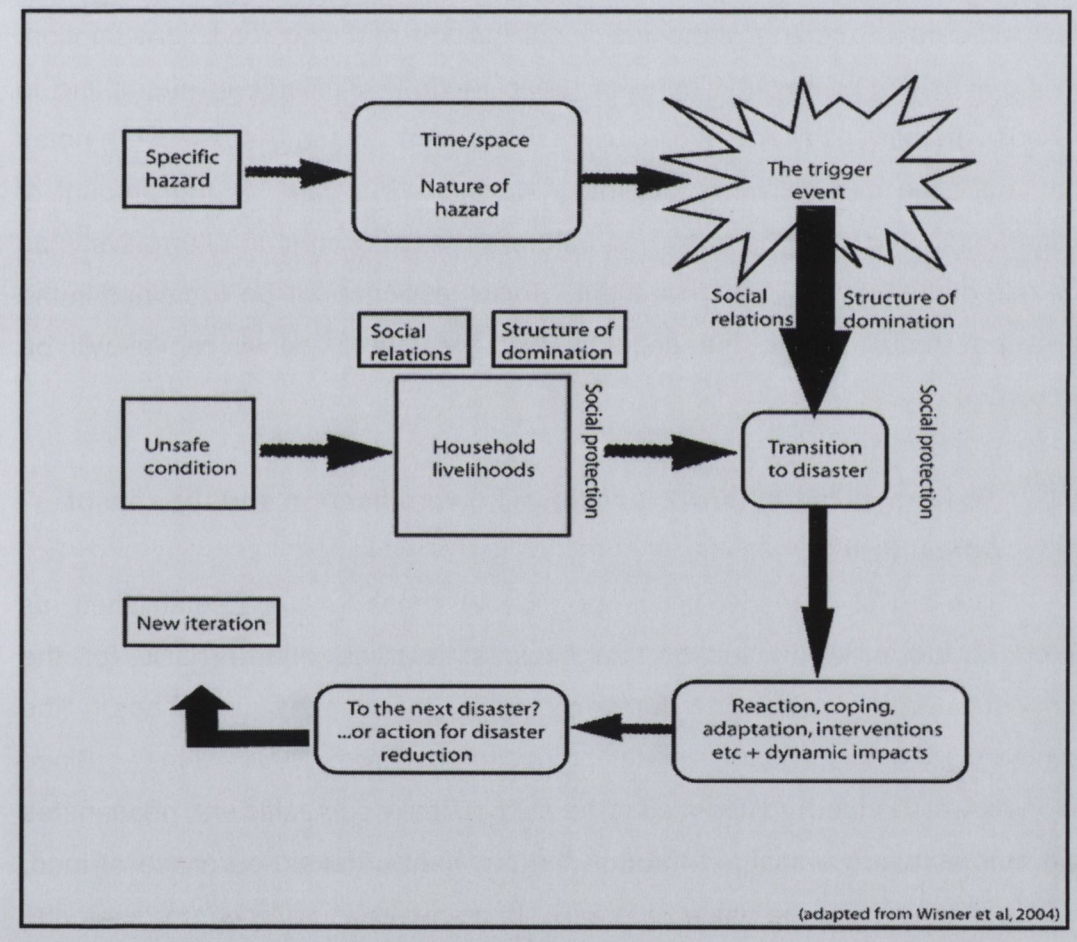


Fig. 2.2 The access to resources model

The opposite of vulnerability is resilience, and in seeking to identify and evaluate resilience at population level much attention has been paid to coping mechanisms or the various methods that are employed to deal with the impact of disasters. Barnett and Blaikie (1994), in discussing HIV-AIDS as a long wave disaster, distinguish two ideal types of coping mechanism: *a priori* and *ex post* risk aversion strategies. The former involve pre-emptive actions to minimize the probabilities that the disaster event will occur in the first place (Barnett & Blaikie, 1994), such as multiple cropping, grain storage and maintaining high birth rates in situations of high infant mortality, while the latter have evolved in response to a population's interaction with risky physical environments. In the case of drought, coping strategies might include reducing food consumption, selling livestock or eating famine or green foods[1]. Similarly, in attempting to assess whether social and ecological resilience are related, Adger (2000) notes that resilience can be viewed in many ways, for example, as the amount of disturbance which can be absorbed before an event occurs or, alternatively, as the rate of recovery following an event. Social resilience will be examined in the following section where the debates over the role of social capital will be presented.

2.3 To farm or not to farm? Livelihood diversification and the role of agriculture

The arrival of resource-hungry imperial forces in Africa established, as noted in the previous section, an exploitative trade and a basis for the commercialisation of agriculture or rather, in many instances, "the commercialisation of subsistence production" (Davis, 2001: 344). Since colonies were in theory supposed to be economically self-sufficient, peasantries and markets were entangled through the payment of taxes, purchase of food, selling of crops, and the value of labour. In many areas of Africa, for example, a form of direct taxation, the hut tax, became inescapable when the required tax revenue could not be raised through customs duties (Bryceson, 2000a).

[1] Green foods refer to foods that have been harvested and eaten before they are fully mature.

Colonialism did not manifest itself in the same way everywhere. In the 1970s, for example, Amin (1972) categorised three broad macro-regions of Sub-Saharan Africa. In West Africa, the peasant production of agricultural exports such as cocoa, palm oil, cotton and groundnuts characterised economies. In eastern and southern African colonial settlers moved onto prime agricultural land, alienating former residents and thereby forcing the establishment of labour reserve colonies to work, especially in the agricultural and mining sectors. A third region identified was that of the resource extracting concessionary companies, especially in the Congo River basin, which although accounting for a limited geographic area, was marked by a barbaric history of exploitation. Some areas managed to combine all three. Even theorists at that time noted, however, that such crude geographic amalgamations did not do justice to the postcolonial situation where important differences in the political economy of Africa had developed. Instead Shaw (1975:31) suggested that "under the impact of independence, political and economic change, and an evolving world economy...[Africa]...could be best understood as a group of fluid regions and as a dichotomy of regimes".

In many parts of rural Africa subsistence agricultural production has been combined with poorly paid wage labour – often at the household or even individual level (Francis, 2000). In this, male members of the household migrated to work while the responsibility of agricultural production became an additional task for the women who remained behind in the rural home (Bryceson, 2000a; Ellis, 2000). Recognition of the crucial importance that non-farm income has played in supporting agricultural production has played a vital role in contemporary debates over a perceived crisis in African agriculture. Although notoriously difficult to measure, Chen (2001) estimated that the informal economy accounted for 78% of all non-agricultural employment; 61% of all urban employment and 93% of all new jobs. Access to land alone is not enough to ensure food security for a household (Hussein & Nelson, 1998; Bernstein, 2005); financial capital, such as non-farm income, is important, as are more abstract concepts such as social capital.

Failure to recognise the complex linkages between wage labour and subsistence agricultural production has perpetuated the stale assumption by international institutions and development agencies that "Africa is fundamentally an agrarian continent whose interface with the world market now, and for the foreseeable future is in agricultural commodity exchange" (Bryceson, 1997:11). Influential actors in the international development industry, such as the World Bank (1975), generated policy recommendations that were rooted in this simplistic view. As structural adjustment programmes tightened the belt and curtailed spending on basic services in the 1980s and 1990s, official recognition, much less engagement, with vital areas, such as the relatively booming informal sector, was almost completely absent. Instead ante-diluvian notions of the scourge of communal land management, for example, championed by Hardin (1968), and continued calls for privatisation of communal lands were at the forefront of agricultural policy. This was despite repeated demonstrations that Hardin's argument was flawed and had failed to account for the difference between an open access or free-for-all system with one based on notions of regulated access, often non-codified, to common property (McCabe, 2003).

Against a background of structural adjustment and liberalisation, much of the research on rural economies, particularly in Africa, has focused on the importance of livelihood strategies and diversification as well as assessing the role of agriculture (e.g., Bryceson & Jamal, 1997; Hussein & Nelson, 1998; Scoones, 1998; Bryceson, 1999; Ellis, 2000a; 2000b; Francis, 2000; Murray, 2002; Whitehead, 2002; Bryceson, 2004). By the dawn of the new millennium, official development organisations, in particular the United Kingdom's Department for International Development (DFID), began to embrace and propose models for sustainable livelihoods (Carney, 1998; 1999), albeit within their own frame of economic reference. Before examining the implications of these policies, however, the following sections examine the academic debates that preceded these policy shifts.

An image of the African continent as essentially agrarian-based heavily influenced the policy recommendations of institutions, donors and organisations involved in rural development in Africa for much of the postcolonial period (Ellis, 2000a; Singh, 1990). In the mainstream agricultural development literature, livelihood diversification scarcely features and non-farm rural economic growth is regarded as a natural consequence of improved farm productivity. Livelihood diversification refers to the scope of livelihood strategies that are adopted by an individual, household or community in order to sustain them. Such a process of diversification may have in itself been a reason for declining agricultural productivity as continuing agrarian crises and economic instability forced farmers to direct their attention elsewhere (Hussein & Nelson, 1998:15). Even without crisis and instability, many livelihoods both on and off the farm ran to an irregular beat and diversification was perhaps also a response to seasonalities (Chambers *et al*, 1981; Ellis, 1998). In Ellis (2000b), seasonality is the first of six determinants that affect livelihood diversification which were identified, along with risk spreading, the availability of labour markets, credit market failures, investing in order to enhance future livelihood prospects and diversification.

While diversification is recognised as providing more opportunities to a household, thereby tending to lead to a reduction in vulnerability, it may also serve to exacerbate inter-household economic differentiation over time, as wealthier households accumulate increasingly large proportions of capital (Bryceson, 1999; Ellis, 2000). Certainly at the lower end of the economic spectrum it appears that diversification can, for the very poor, mean the difference between survival and destitution. Berry (1989a) argues, however, that this does not mean that poor producers will then reinvest their increased incomes into agriculture or other areas but, more likely, they are only able to meet their subsistence needs. Such a situation means that diversification has the potential to increase inter-household economic inequality as wealthier households will engage in diversification with a view to improving their livelihood portfolio and investing outside of the agricultural sector, whereas poorer

households respond, in an unplanned way, to stress, shocks and poverty and perhaps have the fewest opportunities to diversify.

Disaster studies have played an important role in contributing to knowledge on livelihoods – particularly with regard to their robustness and the impact that shocks such as natural hazards can have on sustaining livelihoods. According to Cannon *et al* (2004:6): "How vulnerable someone is, is determined by how weak or strong their livelihoods are, how good their access is to a range of assets that provide the basis for their livelihood strategy, or how useful different institutions are in providing social protection". Since livelihood security is the opposite of vulnerability, it would make sense that any relief measures in the aftermath of a disaster would also seek to protect and restore livelihoods of the affected population. Yet while this occurs in some contexts there is a great danger that those whose livelihoods are concentrated in the informal sector will be overlooked. Certainly this was a finding of a study that examined the relief to a cyclone affected area in Gujarat, India in June 1998 (Bhatt, 2003). By the late 1990s, however, there was recognition that financial assistance alone is insufficient for rehabilitating livelihoods. What is also needed is a holistic approach that recognises the importance of other vital factors, such as social and kinship relations, for example. Households are also not just affected by the shocks induced from the impacts of large-scale natural hazards, but also long-term everyday stresses, such as fluctuations in income (Kinsey, 2002).

In the 1990s, the concept of social capital gained a firm foothold as a key explanatory variable in facilitating economic development, especially as a result of research on regional administrations in Italy (Putnam, 1993a; 1993b) and on declining social capital in America (Putnam, 1995; 2000). While Putnam's work brought increased attention to the concept of social capital, namely features of social organisation that led to mutual benefit, its theoretical roots lay with the work of Bourdieau (1986) and Coleman (1988).

The role of social capital was embraced by global institutions involved in devising and financing economic development programmes (Collier, 1998; Dasgupta & Ismail, 1999; Groottaert & Van Bastelaer, 2002), although

researchers in the field of critical development studies identified weaknesses in this use. Hariss and De Renzio (1997) recommended that the different types of social capital needed to be distinguished, such as kinship connections, social networks, political capital and social norms and values, while Fine (1999) was more critical of the way in which the World Bank had adopted the concept while retaining continuity with most of its practices and prejudices. This distinction between those who view social capital as a cover for anti-state neoliberalism (Fine, 1999; 2001) and the maintenance of class distinctions as well as a depoliticisation of development (Hariss, 2001) sits juxtaposed against those who view the concept as a belated recognition of the role that civil society can play in ensuring that not everything is left to the will of the market (Putnam & Feldstein, 2003). Even for supporters, however, social capital has remained a concept in need of greater clarification and definition, particularly when policies aimed at incorporating social capital in development projects can be counter-productive (Radcliffe, 2004). Nonetheless, there remains a crucial role for acknowledging the importance of social relations as a means of securing access to resources (Bebbington, 1999; Bebbington & Perreault, 1999; Batterbury, 2001; Bebbington, 2001; Perreault, 2001). In the context of African rural livelihoods, Berry (1989b; 1989c; 1993) has been one of the earliest advocates of the importance of social relations and access to resources, and that access "depends, in turn, on participation in a variety of social institutions, as well as on material wealth and market transactions" (Berry, 1989c:41).

Not all social relations necessarily strive to achieve a wholesome and legal end, of course. Social networks in underground economies have long been recognised throughout sociological and anthropological accounts (Becker, 1963; Whyte, 1993; Woolcock, 1998; Bourgois, 2003). In such situations, however, marginalised populations have been a segment of the population, quite distinguishable from mainstream society. In contrast, larger populations participating in extra-legal activities, such as the major drug producing areas in Colombia and Afghanistan, have been the focus of many attempts to determine the causal factors behind the emergence of underground economies. Using the

example of Colombia, Rubio (1997:807) mentions "perverse social capital", suggesting that it is not sufficient to limit the analysis of social capital purely to society's formal productive sector but also to understanding criminal behaviours and the role played by perverse social capital in strengthening the institutional mechanisms that perpetuate this situation.

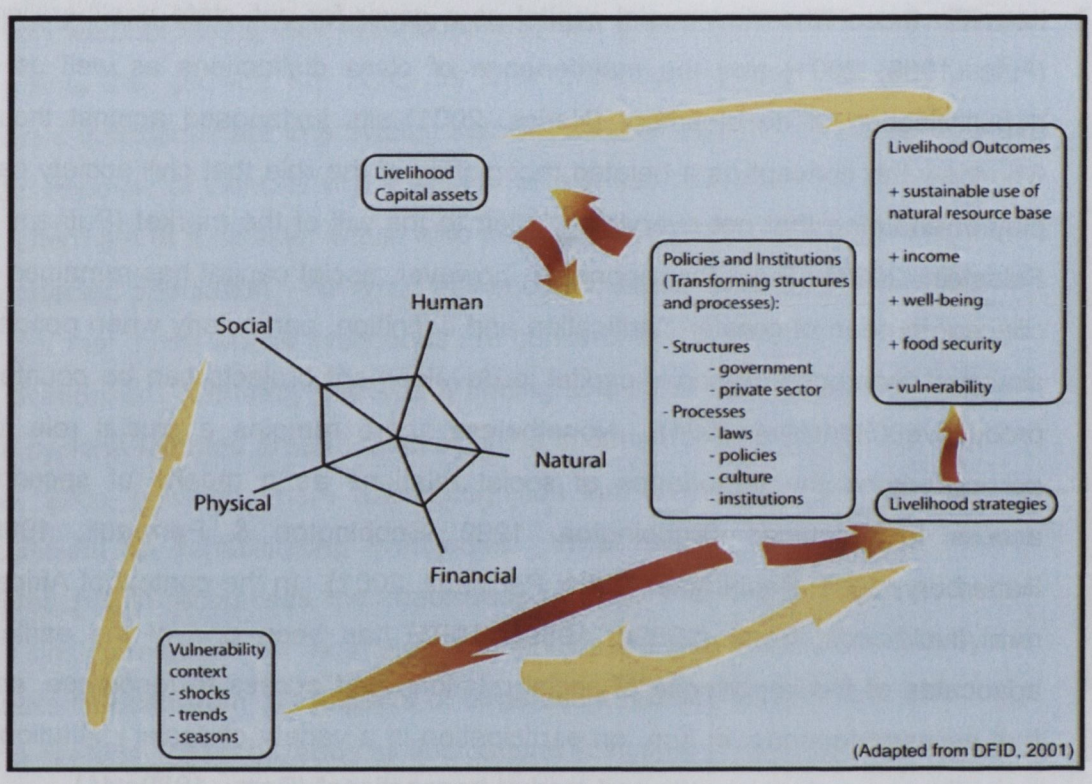


Fig. 2.3 The sustainable livelihoods framework

It is worth commenting on the adoption of the livelihoods perspective by development organisations such as bilateral donors, for example DFID, because of the debate and criticisms it has provoked. According to the sustainable livelihoods framework (see Fig. 2.3), a livelihood comprises the capabilities, assets (which are divided into five categories: human, social, natural, physical, and financial) and activities required to maintain a living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets, both now and in the future, while not undermining the natural resource base (Carney, 1998; 1999;

Scoones, 1998). The framework suggests that the five livelihood assets or capitals are combined in various ways in order to cope with increased vulnerability as a result of seasonal variations, short-term economic shocks or longer term trends in changing vulnerability. The idea is that combined with institutional structures and processes, people are able to follow particular livelihood strategies and the viability of these can be roughly measured by external agencies to determine when support is required. The process aims to be participative in its design and implementation, holistic in its support to all sectors and to build on strengths that already exist. Scoones (1998) proposes three broad clusters of livelihood strategies open to rural people: agricultural intensification/extensification; livelihood diversification; and migration.

While few would disagree with the principle of sustainable livelihoods for impoverished people, many observers had issues with how the paradigm functioned in practice, and in particular its emphasis on participation, and with its unclear definition of sustainability. Murray (2002) states that a much longer timeframe is needed than is normally used to assess the structural, historical and institutional elements and to project livelihood trajectories. Bryceson (1999; 2004) expresses similar concerns about the framework's narrow, ahistorical approach, which has failed to account for many socio-economic changes and the influences of both extra-national processes such as globalisation, as well as being facilitated and contructed in part by national states themselves.

For sceptical theorists, there would appear to be little new in the sustainable livelihoods framework, as has also been argued for sustainable development more generally, a paradigm that some have argued has reached a conceptual and political dead-end (Sneddon, 2000). However, it is also important to note that the livelihoods of poor and marginalised populations are closely linked to questions of environmental sustainability, and looking at one without looking at the other does not make any sense (Neefjes, 2000).

2.4 Recent developments and gaps in understanding the political ecology of extra-legal livelihood strategies

Terminology is important when considering the illict and informal economy. Illegal, for example, may not be the most appropriate label for activities that can also involve members from the formal government structure such as police. Indeed, dichotomies such as global/local, legal/illegal and traditional/modern have little explanatory relevance now when examining the highly variable impacts of globalisation in sub-Saharan Africa (Duffy, 2007). Rather than being physically separated, such dichotomies occupy the same space, with integration and the production of wealth happening simultaneously and in the same spaces as exclusion, marginalisation and poverty. As Reno (1998) has noted, the shadow political-economic systems that function alongside the State and the formal economy, not separately from it, deserve much greater academic attention. Referring to the interactions between African societies and MDCs, Bayart (2000) employs the terms *pays legal* and *pays réel.* The former is the legal structure that is the focus of attention for donors and MDCs, while the latter is an informal structure where the real power lies. Similarly, the formal and informal economies, criminalised networks and politics combine in complex ways, which need to be considered in a holistic manner (Nordstrom, 2002; 2004; Bayart & Hibou, 1999; Duffy, 2007). Most research in this area has focused on high value African products destined for markets in MDCs (De Boeck, 1998; 2001; Nordstrom, 2004; Duffy, 2005; 2007) but it can usefully be applied to other regional trades such as cannabis production and trafficking within southern Africa.

A more useful label for livelihood strategies that encompass illegal activities that are to an extent tolerated is extra-legal livelihood strategies. Such strategies are outside the formal law, yet actors involved frequently are engaged in both the formal and informal or shadow economies, often using formal political connections and corruption to achieve their aims. Labelling such strategies as illegal tends to place the focus on the most marginalised, those at the bottom of the chain, such as diamond diggers, coltan miners and cannabis

farmers. Extra-legal, on the other hand, promotes a more holistic consideration of the concept, and one that seeks to examine the linkages between the formal and shadow political-economic systems. The term extra-legal is generally used in this dissertation when discussing livelihoods, although the term illicit is also used to refer to specific acts that break the law.

Most research on extra-legal or informal livelihood strategies in developing countries maintains an almost exclusive bias towards urban settings. Prostitution, for example, has been the subject of much research, especially in the face of a HIV-AIDS epidemic that has engulfed many regions and communities across the globe, but most notably in southern Africa (e.g., Ryan, 2001; Leggett, 2002; Amir, 2006; Agustin, 2007). Other research foci have been the informal sector, for example, illegal street trading (Lourenço-Lindell, 2002; Staples, 2007). Frequently rural-urban links are recognised with regard to migrations between the countryside and built up areas and the transfer of remittances to the rural areas, as in the legal sector, but the extra-legal or informal activities themselves are predominantly situated in urban areas. There is, of course, a large literature concerning the extra-legal exploitation of natural resources such as timber (Le Billon, 2000; Tacconi, 2007), oil (Watts, 2001a; ICG, 2006), diamonds (Le Billon, 2001a) and the ivory trade (Håkansson, 2004). Yet the majority of these studies have been primarily concerned with placing livelihoods incorporating extra-legal activities into the regional and global political economy (Anderson *et al*, 2007), and often little attention is paid to the individuals and communities themselves, especially in areas affected by conflict (Le Billon, 2001b; Peluso & Watts, 2001; Ross, 2004) or the enforcement of, for example, national park boundaries (e.g, Neumann, 1998; Brockington, 2002).

Chapter 3: The political economy of cannabis and livelihoods in southern Africa

This chapter will begin with an introduction to Lesotho before examining the political economy of cannabis in southern Africa and Lesotho. The final section will examine the historical context of rural livelihoods in Lesotho as well as contemporary developments.

3.1 Lesotho: background information

The Kingdom of Lesotho is situated at the highest part of the Drakensberg escarpment of the eastern rim of the southern African plateau, between 1500 mamsl and 3482 mamsl and between, approximately, 28° 35' and 30° 40' southern latitudes, and 27° 00' and 29° 30' eastern longitudes. With an area of 30,355 km², Lesotho is a small country in comparison with the majority of its neighbours (see Fig. 3.1).

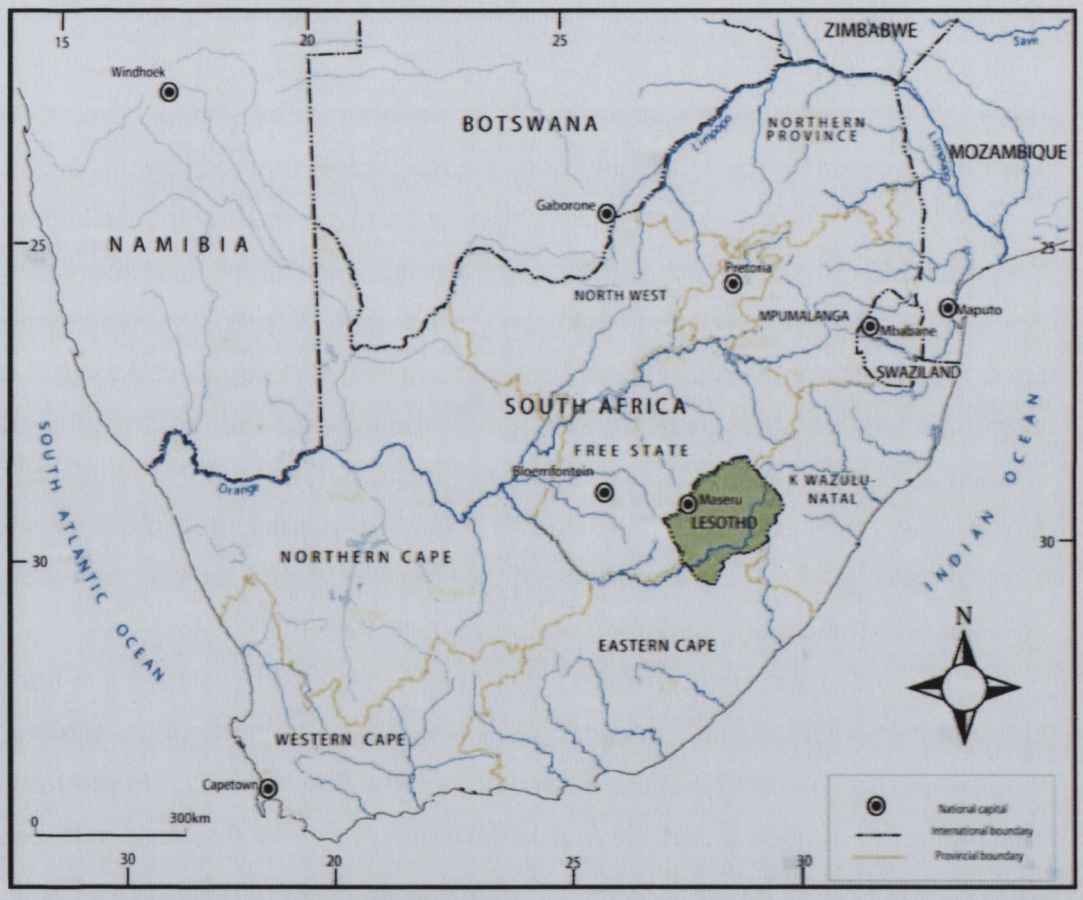


Fig. 3.1 Map of southern Africa

Lesotho is one of the few states in Africa that are ethnically and linguistically homogenous comprised primarily of the Basotho ethnic group, with the principal spoken language being southern Sotho. The formation of the nation state arose from the pressures that the Basotho experienced during the nineteenth century from the same two populations that border the country

today, namely the Zulu and the Afrikaners. Under Moshoeshoe I (1786-1870), the Basotho were able to resist the expansionist aims of both Shaka's Zulu warriors during the *lifaqane* and the Boer *Voortrekkers*, who had left the British-controlled Cape. Their untenable situation, however, became an opportunity for the British government to establish a presence in the area and for the Basotho to retain their own land (Atmore, 1969).

The UK government established the protectorate of Basutoland in 1869, an act that finally stabilised the frontier between Basotho and Boer, using the Mohokale River as the line of demarcation and leaving the fertile eastern highlands of the present-day Free State under Boer control, an area that is still referred to by the Basotho today as the conquered lands (Pakenham, 1991). The decades after the UK usurped control were marked by a growing prosperity, as Basotho wheat was in high demand on the mining settlements that were being established in the neighbouring Boer republics of the Orange Free State and the Transvaal. As the mines grew, so did the employment opportunities at the mines. The colonial government had introduced the hut tax in the late nineteenth century and, along with the purchase of firearms, this had created a need amongst Basotho to earn cash. These factors combined to ensure that many Basotho men started to venture across the border to seek work at the mines. Thus the seeds of the migrant labour system that was to develop over the coming century were sown (Gill, 1993).

The UK government invested little in Basutoland during the initial period of the protectorate, possibly according to Pule (2002), because of the likelihood that the territory would eventually become part of South Africa. Furthermore, Murray (1980) suggests that the lack of investment in Lesotho may have been seen as a means of generating labour for mines in South Africa. Further to this, a founding member of the Basotho Congress Party has claimed that in 1932 the South African Prime Minister, General Hertzog, officially requested the British colonial secretary, J.H. Thomas, to stop Basotho growing wheat in Lesotho (Mphanya, 2004).

By the middle of the twentieth century A.D., Lesotho had become established as a key labour reserve colony for the South African mining industry, with approximately 200,000 Lesotho citizens working in South Africa by 1975, compared with 27,000 in paid employment inside Lesotho (Hirschmann, 1979). According to Leys (1979), the migrant labour system had a damaging effect on the economic and social structure of Lesotho. The social impact of the migrant labour system in rural Lesotho was examined in detail by a number of researchers in the late 1970s (Murray, 1981; Spiegel, 1980; Turner, 1978) and these will be discussed further in the next section. Suffice to say that, having obtained independence from the UK in 1966, the challenges facing the governing authorities of Lesotho were immense (Bardill & Cobbe, 1985).

The collapse of multiparty democracy in 1970 marked the beginning of over two decades of authoritarian rule in the state, beginning with the dictatorship of Leabua Jonathan. The dictator initially followed a policy of maintaining cordial relations with the apartheid regime in South Africa. By the mid-1970s, however, the benefits of rising international condemnation of apartheid and the consequent bi-lateral aid that was then forthcoming, enticed Lesotho to become a vociferous frontline state in the region (Southall, 2003), although not sufficiently provocative to completely alienate a neighbour that employed five out of six Basotho in formal employment[2]. The dilemma of dependence was clear and as Wellings (1986:218) pointed out, "no other country in the world presently experiences the same proportion of its labour force working outside its borders, nor the same degree of dependency on foreign employment for its national income".

The influx of foreign aid and the remittances of mineworkers as well as the supplemental income received from excise and sales duties as a new member of the SACU ensured a decade of rapid economic growth for Lesotho in the 1970s. The growth rate proved impossible to maintain into the 1980s,

[2] Frontline States was an organisation established to achieve black majority rule in apartheid South Africa. The organisation no longer exists but former members included: Angola, Botswana, Lesotho, Mozambique, Tanzania, Zambia, and Zimbabwe.

however, and by the middle of the decade the overall budget deficit began to climb, ultimately leading to the adoption of the first structural adjustment programme in 1988 (Lundahl *et al*, 2003).

Many of the mistakes that have now been associated with development projects across the continent are clearly evident in Lesotho. Perhaps this is all the more so because of the importance that foreign aid as a proportion of gross domestic product (GDP) meant for a country like Lesotho and therefore the development agencies, be they foreign governments, international organisations or non-governmental organisations. Strategies during the 1970s and 80s typically involved area-specific rural development projects that focused on issues such as rangeland management, non-traditional crops and the expansion of non-farm activities.

Wellings' (1986) identified five key reasons why these rural development projects ultimately failed. Firstly they were "clearly premised on the assumption that rural development in Lesotho was a matter of increasing agricultural productivity, most particularly in basic grains" (Wellings, 1986:227). Secondly he pointed to a generally ambivalent attitude amongst the pastoral Basotho towards agricultural innovation. Thirdly he criticises the authoritarian, top-down approach that was adopted by project organisers, frequently ex-patriate staff on short-term contracts with very little understanding of Basotho culture and society. Fourthly he observed that due to the migrant labour system there was a scarcity of labour during periods of peak labour demand in the agricultural cycle. Finally he raised the issue of the land tenure system as being inimical to the success of some aspects of rural development projects, although he noted that this issue was less clear-cut than had been suggested (Wellings, 1986:228). The first and the last of these issues have particular import in the context of development agency thinking on Lesotho. They are worth discussing further, and both the issue of improving agricultural productivity as well as debates over land tenure practices will be addressed below. Just to comment here that until relatively recently, improved agricultural productivity was viewed as the natural panacea to Lesotho's underdevelopment. This perspective

generally failed to properly recognise the importance of the fact that Lesotho's rural population were part of an industrial workforce, dependent on the remittances received from relatives in the South African mines and other paid employment (Ferguson, 1990). Murray's (1981:19) assessment of the Basotho as being essentially a "rural proletariat which scratches about on the land" captures the situation very accurately, with the men migrating to work on both the mines and farms of South Africa. For development agencies, however, the possibility of agricultural reform was the only truly viable justification for their presence in the country, since they could not effect change on other key employment sectors, situated as they were within apartheid South Africa.

Ferguson (1990) provides a particularly searing critique of the development industry in Lesotho. According to Ferguson (1990:8), "for the 'development' industry in Lesotho 'failure' appears to be the norm". In an examination of the case of the Thaba Tseka rural development project in the early 1980s, his despondency about the de-politicising effect of the development industry on both poverty and the state is evident:

> "The 'development' apparatus in Lesotho...is an 'anti-politics machine', depoliticising everything it touches, everywhere whisking political realities out of sight, all the while performing, almost unnoticed, its own pre-eminently political operation of expanding bureaucratic state power." (Ferguson, 1990:xv)

In a later article Ferguson (1997:132) reflects on how development discourse in Lesotho has largely succeeded in depoliticising poverty and notes how "discussions of poverty in Lesotho have rarely made any reference to South African state policy, enforced low wages, influx control, or apartheid".

A key challenge for independent states in the postcolonial era, especially in Africa, has been achieving a resolution between traditional-modern dichotomies (Turkon, 2003). This statement is by no means a justification of modernisation theory, which subscribes to the viewpoint that the "main cause of widespread poverty is the 'traditional' nature of certain societies" (Pavlich, 1988:593). This is a belief that many of those in the development industry

would have held to and designed projects around (Ferguson, 1990). Rather it seeks to highlight the debate that occurs between traditional-modern dichotomies, where traditional culture, law and practices clash and are juxtaposed against imported, Western notions of modernity. Two particularly pervasive dichotomies in Lesotho concern governance and the issue of land tenure. The former is of direct relevance to issues encountered during this project and the latter is an indirect issue but one that warrants consideration in any investigation relating to agriculture in Lesotho.

The chieftaincy and the local government form two contesting power structures attempting to control power at the local level in Lesotho. The theoretical model of chieftainship follows a pyramid structure with the *morena emoholo* or paramount chief (the King of Lesotho) at the top and filters down through the different levels including the *morena oa seterke* (district chief), the *morena oa sehlolo* (ward chief) to the *ramotsi* (village headman). The responsibilities of the chiefs are outlined in the laws of Lerotholi, a written document that attempted to integrate customary practice with common law. As Gay (2006:2) notes, "the main responsibilities of a chief were to allocate farming land, give permission to own livestock, control access to grazing land, restrict the cutting of thatching grass and trees, assign locations for house sites, settle disputes and welcome strangers".

Although various forms of decentralised governance have been attempted since independence in 1966, the local government councils that were elected in 2005 represent the most comprehensive attempt yet at establishing democratically elected representation in rural areas. Previous attempts at decentralisation failed because rural people still had confidence in their chiefs and they had little recognition and acceptance for the elected councillors. One reason put forward to explain this was that rural communities are deeply rooted in culture and they believe this to be represented by the chiefs (Pherudi, 2001). The local community councils are meant to assume many of the roles that the chiefs would have normally fulfilled, with the chiefs maintaining an advisory position to the council under the new scheme. However, when the electorate

finally went to the polls in April 2005, the distinction between the functions of the proposed Community Councils versus those of the chief remained unclear in the minds of many (Shale, 2005).

Some observers question the presumption that chieftainship-national government represents a classic traditional-modern dichotomy. Quinlan and Wallis (2003) emphasise the ability of the chieftainship to evolve as the situation requires and believe that chieftainship will remain an important part of daily life in rural areas. Indeed a few years earlier Quinlan (1995:233) had identified the chieftainship as "the institutional focus of rural struggles for authority over how external political and economic forces and consequences are assimilated into local society". Central government, by comparison, is viewed with a combination of expectation and distrust by rural communities and is not the prime focus of the rural populace (Coplan & Quinlan, 1997).

The other issue that is crucial to understanding the context of any analysis of agriculture in Lesotho is that of land tenure. One of a chief's principal responsibilities has traditionally been the allocation of communal land. Land in Lesotho belongs to the Basotho nation and is enshrined in the maxim *lefatshe le la sechaba* (the land belongs to the people), with the king holding it in trust for the nation. In practice, however, the reality is very different with high levels of landlessness existing and with the productive resources of the country being concentrated amongst the wealthy elite (Ramodibedi, 2000). Mokitimi (1998:5) notes that "after the colonial government deprived chiefs of certain judicial powers, the administration of land was seen as the last important pillar of power for chiefs". Thus the various attempts by local government institutions to obtain control over land in the years following independence were sabotaged by the chieftainship, especially with regard to the 1979 Land Act, with the chiefs failing to implement the new legislation (Mashinini, 1998). The chieftainship, correctly perhaps, viewed that the Basotho National Party, then in power, wanted to reduce the power of the chiefs by removing the basis of their social power (ISAS, 1993).

Along with increasing agricultural productivity, reform of the dual land tenure system in Lesotho has been a key aim of development agencies in Lesotho (for example, see IFAD, 2000)[3]. This is characteristic of a viewpoint that denigrated the ability of communal land systems to function efficiently and instead focused wholeheartedly on the promotion of private land ownership. The key basis of this presumption was that communal management resulted in reluctance for long-term investment in land and that "improved land security, combined with improved access to rural based services will lead to more efficient land use practices" (Selebalo & Effler, 2002:8). As Pule and Thabane (2004) argue, in the context of Lesotho, low agricultural productivity is largely due to factors such as depleted soils and lack of capital rather than problems with land tenure, although there are problems with the latter. These problems, they go on to argue, arise out of the confusion that exists in operating the dual land management system and who has final authority over land related disputes.

Since the collapse of the apartheid regime in South Africa in 1994 Lesotho lost its geo-political significance as a frontline state in the struggle against apartheid (Love, 1996). Lesotho remains in a state of economic dependency on its much more powerful neighbour, a dependency which is fact generating underdevelopment as the "retrenchment of mineworkers, diversion of aid, and flooding of markets with South African produce all handicap internal attempts" (Love, 1996:78) at some form of independent development. The threats are not just from dependency on South Africa however and as will be discussed later in the chapter, challenges resulting from the HIV-AIDS pandemic, environmental degradation and the sustainability of local industries, notably textiles, all negatively threaten future socio-economic prospects. Even the World Bank is pessimistic about the medium term economic prospects, citing four key factors for their position: political instability and the uncertain outlook for foreign direct investment; continuing decreases in remittances; the

[3] Under this system, both customary and statutory land tenure operate together to determine entitlement to land.

expected drop in revenue from SACU as a result of new procedures; and decline in investment to the Lesotho Highlands Water Project (LHWP) (Hassan, 2002:4).

3.2 The political economy of cannabis in southern Africa

3.2.1 Cannabis: an overview

Believed to have originated as a feral plant in Central Asia, cannabis[4] was harnessed around 1500 B.C. for use as a drug by the nomadic Scythians who spread its use into South Asia and the Middle East (Benet, 1975; Matthews, 2003). From the third century A.D. cannabis appeared in eastern Africa as a result of Arab trading routes being established along the coast as well as trade routes with Egypt. Archaeologists have been able to identify pipes containing traces of cannabis in Ethiopia that date to the 1300s A.D. (Earlywine, 2002). Further dispersion was facilitated by Arab traders and by the residing Bantu tribes into southern and central Africa, although West Africa was notably devoid of cannabis until the twentieth century A.D.

While the primary reason for the cultivation of cannabis in most parts of the world is its value as a recreational drug, cannabis has traditionally been used in cultural ceremonies, for the treatment of a wide variety of ailments and as a food source. The latter usage has been recorded during famines, such as the period of scarcity induced by Mao Zedong's "Great Leap Forward" in the 1960s, and previously in Europe during the Second World War (Booth, 2003:5). Although now recognised as an illicit crop and drug by international treaties, this formal declaration of illegality was rooted in colonial administration. According

[4] Several different terms for cannabis appear in English literature as well as regional language variations, all referring to the Cannabaceae family. North American literature favours the name marijuana whilst cannabis is mainly used in Europe and by UN agencies. Within the southern African context, *dagga* (pronounced dac-ha) is the most common term, although specific languages still have their own translations. In Southern Sotho, for example, the formal term is *matekoane*. While this dissertation will use cannabis, an abbreviation of the species *Cannabis sativa*, as the default name, *dagga* and *matekoane* will also be used when discussing the southern African and Lesotho contexts and in the presentation of the research findings. Indian hemp was the name used in colonial India and was used in official documents from the time. Hemp is the common name for *Cannabis* strains cultivated for non-drug use.

to Mills (2003), the British Raj's interest in taxing the lucrative Indian hemp trade in India during the 19th Century A.D. can be viewed as a first step in the criminalisation of cannabis, as it was from this point that control of cannabis emerged onto the agenda of international policy makers. Ironically, the production hemp had played a key role in European imperialism since the eighteenth century A.D., by providing the fibre for ropes and shipbuilding that were necessary for military and naval expansion (Booth, 2003).

With the formal international criminalisation of the cannabis trade after the culmination of the Second Opium Conference in 1925, the use and cultivation of cannabis was driven underground (Mills, 2003). Particularly in Europe and North America, cannabis became synonymous with the drug-induced escapism of the 1960s as well as a symbol of protest that was personified by Bob Marley and his fellow Rastafarian reggae singers. Academic research was also polarised and heavily influenced by the illegal status of the drug and most research into cannabis at the time was aimed at providing evidence against using the drug (Matthews, 2003), especially research that received funding from institutions such as the National Institute on Drug Abuse in the United States. Other research has focused on the potential medical use of cannabis (Grinspoon & Bakalar, 1997; Baker *et al*, 2003; Wingerchuk, 2004).

Cannabis is normally consumed by smoking both the dried leaves and flowers of the plant, known as herbal cannabis, or the pressed secretions of the plant, which is cannabis resin, commonly referred to as hashish in Europe and North America. Cannabis oil is a third, less common product that can be consumed orally and without smoking. These categories can be further divided into a number of different grades and strains based on the strength of the drug that is determined by the levels of delta-9-tetrahydrocannabinol (THC), the principal psychoactive component of cannabis (Leggett, 2006a). Within herbal cannabis, for example, quality varies from field-grown cannabis to the more potent varieties that are bred without seeds[5] and often grown indoors using

[5] These varieties are known as sinsemilla, from the Spanish *sin semilla* – without seeds

hydroponics and grow-lamps (Matthews, 2003:161). Indeed the indoor cultivation of high strength cannabis in North America and Western Europe is reducing the demand for field grown cannabis supplied by, for example, Mexico.

Cannabis resin is collected from a sticky, sap-like substance that is produced by glands known as trichomes and is pressed into portions that can vary in consistency from putty-like to brittle and in colour from sandy to reddish to black (Leggett, 2006a). Although cannabis resin can be produced from any cannabis plant, large-scale production is restricted to only a few regions, most notably Ketama in Morocco as well as Nepal, India, Afghanistan and Pakistan. There is no evidence of its production in southern Africa.

Cannabis belongs to the family Cannabaceae. Two or three species of cannabis are recogised: *Cannabis sativa*, *Cannabis indica*, and (depending on the sources consulted) *Cannabis ruderlis* (see Plate 3.1). Its widespread geographic distribution is a testament to its highly adaptive and hardy nature, but certain conditions, as outlined below, are required for the plant to reach its full potential. The ecological characteristics of the plant and the conditions required for successful growth will also be seen to have important implications for the extra-legal production of cannabis. Cannabis grows best within a temperature range between 14 and 27°C, although it can withstand freezing temperatures for brief periods of time. While the cannabis plant has the capacity to grow in difficult soil types, such as sandy soil, loams rich in nitrogen provide optimum conditions, and for this reason it is often found around human settlements, particularly in human waste dumps and manure. Cannabis requires large quantities of nutrients (especially nitrogen) to flourish, particularly in the periods preceding and during flowering. Cannabis also prefers direct sunlight, and although it has a large taproot, the plant generally grows best under moist conditions (Leggett, 2006a). Furthermore seasonally dry conditions appear to favour the production of resin as well as reduce the incidence of fungus and moulds. Cannabis is also resistant to many predatory insects and this can be an important factor for peasant farmers who, due to economic constraints, are not using pesticides for cultivation.

Cannabis is an annual but the number of lifecycles that can be achieved in one calendar year varies from a single six-month cycle in temperate climates to as many as four in locations closer to the equator (Bernal *et al*, 2000). Another unusual feature of the plant is that it is dioecious, and the unfertilised female plant produces the best quality drugs. The quality is also enhanced at altitude, possibly because growth rates are slow and there is therefore more time for the plants to produce the psychoactive compounds (Matthews, 2003).

Due to the bulky nature of cannabis relative to other drugs, cannabis markets tend to be much more localised than those of opium or cocaine, for example. Often producer countries border wealthier centres of consumption, such as Mexico for the United States and Morocco for Europe. This localisation has also been a result of increased law enforced efforts to curtail drug trafficking. Such shifts from previously profitable remote locations to more localised trade and increased indoor domestic production in the consumer centres are likely to continue, making long-distance cannabis trafficking unprofitable (Leggett, 2006a).

Statistics used to describe world drug markets need to be understood within the context in which they were obtained. For example, Mexico has consistently topped global cannabis seizures in recent years, being responsible for 37% of the cannabis seized worldwide in 2003 with over two thousand metric tons (Leggett, 2006a). Such figures need to be viewed against the backdrop of the funding that Mexico receives from the United States' Drug Enforcement Agency (DEA) to pursue very aggressive seizure and eradication programmes. It is also important to recognise the political fallout that curtailing the drug production and trafficking of South American producers has for Mexican authorities, who are being heavily pressured by the DEA (Hanson, 2007; MacAskill & Tuckman, 2007).



Plate 3.1 Female and male *Cannabis sativa* plants

A detailed presentation of global cannabis markets is beyond the scope of this project, especially when one considers that according to the 2001 annual report of the United Nations Office on Drugs and Crime (UNODC), cannabis was grown in 103 out of 111 countries surveyed worldwide (see Fig. 3.2). However while sites of production for the major consumption centres may have altered and become more localised, they have not diminished. Attempts at eradicating crops and curtailing trafficking have been largely unsuccessful to date, and when production is stopped or reduced at one place it merely emerges in another.

The regulation of cannabis under international legislation did not happen until 1925 and even then it was unexpected political reciprocities that resulted in its formal criminalisation (Kendell, 2003). In 1924 the Second Opium Conference had been organised by the League of Nations in Geneva and its remit was to strengthen the controls on opium and cocaine that had been negotiated at the First Opium Conference in The Hague in 1912. The listing of cannabis under the same controls that had been proposed for opiates or cocaine was not anticipated, but during the conference the Egyptian delegation pressured for cannabis to be included, apparently due to the delegation's concern about the effect cannabis use had on mental health (Kendell, 2003). There were concerns, however, particularly amongst the British and Indian delegates that such controls would interfere with commerce of Indian hemp (McAllister, 2000), which formed the basis of a valuable fibre industry in India (Kendell, 2003). Despite European colonial powers being concerned about implementing controls on a drug that was widely used and "imbued with cultural and religious significance" (Kendell, 2003:148), cannabis was included as a controlled substance as part of the 1925 Opium Convention. This also satisfied opium-growing countries, such as Egypt, which were being asked to bear the economic cost of a clampdown on opium (McAllister, 2000).

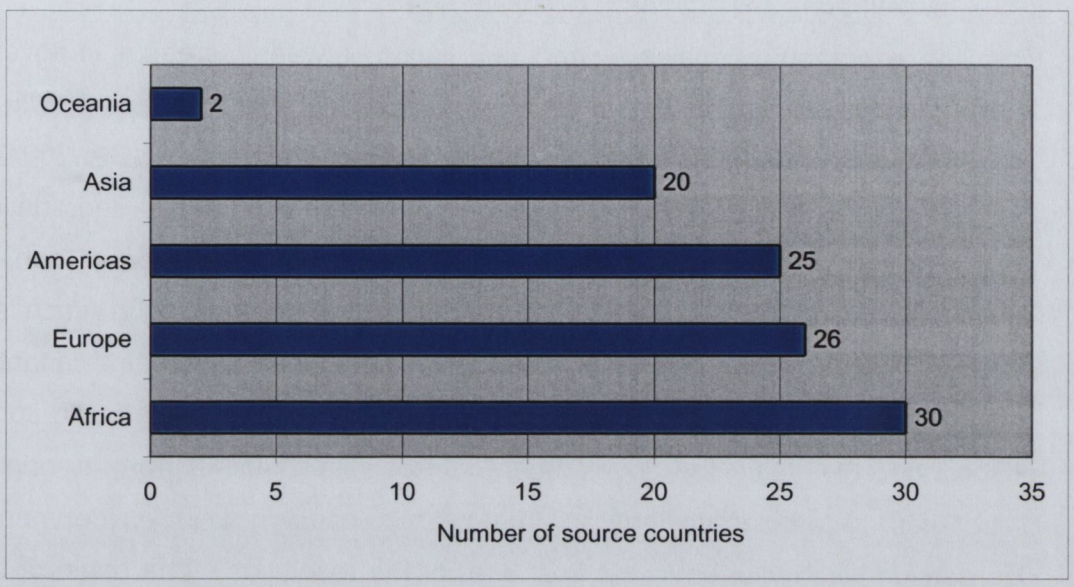


Fig. 3.2 A regional breakdown of source countries for cannabis: 1998 - 2001 (Source: UNODC, 2003:33)

More recent international treaties that have built upon the 1925 Opium Convention include the 1961 United Nations Single Convention on Narcotic Drugs (UN, 1961), the Convention on Psychotropic Substances of 1971 (UN, 1971) and the Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 (UN, 1988). Of particular interest to this project is the recent Resolution 59/160 that was adopted at the fifty-ninth session of the UN General Assembly (UNGA, 2004a). Focusing on cannabis in Africa, two paragraphs are of special interest:

> "*Concerned further* that cultivation of and trafficking in cannabis are on the increase in Africa partly as a result of extreme poverty and the absence of any viable alternative crop and partly because of the profitability of such activity and the high demand for cannabis in other regions of the world.
>
> *Noting with concern* that increased cultivation of cannabis in Africa is extremely dangerous for the ecosystem because it leads to extensive use of fertilizers, overexploitation of the soil and

destruction of forests to make room for new cannabis fields, thus accelerating soil erosion." (UNGA, 2004a:1)

The first paragraph maintains a direct correlation between increases in poverty levels in Africa and a rise in cannabis production and also links this growth in production with demand for cannabis in other parts of the world (UNGA, 2004a).

Evidence to support links between increased environmental degradation and increased cannabis production, the focus of the second paragraph, is difficult to acquire. In fact, the actual extent of cannabis cultivation in Africa is a subject of much debate (UNODC, 2004; 2007a), and links between cannabis cultivation and, for example, accelerated erosion, should be viewed with some scepticism. Retracing the development of Resolution 59/160 from its origins also failed to provide insight as to how this concern with environmental degradation was included in the final draft of the resolution. The origin of the resolution can be traced to the Commission on Narcotic Drugs and in Resolution 45/8 (ESC, 2002), the precursor to the present resolution, where no mention of the link between cannabis cultivation and environmental degradation appears. Yet by 2004, the idea that increased cannabis cultivation in Africa led to extreme environmental degradation was given credibility through its incorporation in Resolution 59/160 (2004a). A review of the minutes of the Third Committee (UNGA, 2004b) that proposed Resolution 59/160 also failed to uncover the reasons behind its conclusion or the evidence presented to substantiate such a claim[6].

Poverty is usually regarded as the primary motivation for rural communities to engage in extra-legal crop production (Labrousse & Laniel, 2001). Alternative development programmes have sought to promote legal substitute crops and other economic incentives for the eradication of drug crops in drug-producing countries. However, a widespread failure of alternative

[6] Replies to a query by the author to the UNODC as to the rationale for including such a statement in the Resolution suggested political motivations were a factor. They suggested that some African governments were eager to access alternative development funding that exists for drug producing areas and so were anxious to have the environmental impacts of cannabis noted and stressed as being severe. No one would however go on the record with these claims.

development programmes suggests a need to reassess the link between poverty and drug production (Mansfield & Sage, 1998).

Changes in global market structures, for example, have been a factor in many instances in displacing legal livelihood strategies in favour of illicit crop production. Take the case of the Caribbean for example. Although the Caribbean's share of the world cannabis market has been in steady decline over the last couple of decades (Leggett, 2006a), from 20% of world market production in the 1970s to 5% today (AP, 2001), some islands of the region, such as St. Vincent and the Grenadines, have seen a resurgence in cannabis production as a result of reduced profitability in the banana export industry (Ceara-Hatton, 1999; DINSAG, 2003). Similarly, Labrousse and Laniel (2001b) and Labrousse (2003) highlighted an expansion of cannabis production in former cocoa growing areas of Cote d'Ivoire, Ghana and Nigeria, linking the expansion to a reduced value of cocoa exports and agricultural subsidies in developed nations. Allen (1999) also identified a link between a decline in the production of legal cash crops in Togo (coffee and cocoa), the Gambia and Senegal (groundnuts) and an increase in new cannabis crops. Other macro-economic policies, such as structural adjustment programmes, have most likely provided similar momentum for extra-legal crop production in areas where rural poverty has increased as a result of fiscal austerity at the national level, something which has also been documented in the Caribbean region (Bernal *et al*, 2000).

A final consideration are what Hobbs (2004:301) termed "drug landscapes", which are highly contested sites, with cultivators feeling a close attachment to the landscape due to the relatively high economic value of their crop and with national authorities despising them for their illegality and subversion. For these same reasons such landscapes are usually landscapes of fear and conflict, as well as being sensitive to external events, such as market conditions, and other pressures, such as drug raids and environmental stress (Hobbs, 2004).

3.2.2 The political economy of cannabis in southern Africa

Africa and the drugs trade

The current role of Africa in the global drugs trade has been facilitated by globalisation, particularly in communications and the ease and speed with which capital can be moved (Allen, 1999). Moreover, changes that have occurred within Africa's political economy since the mid-80s, particularly structural adjustment programmes and trade liberalisation and fiscal retrenchment, have influenced the production and demand for illegal crops such as cannabis. Similarly there have been significant changes in the relationships between African states, and between African states and international organisations. At the continent level, the African Union has attempted to promote integration and cooperation over a variety of issues, including trade and infrastructure, which can also facilitate trafficking as well as policing. Certainly within the southern African context, the development of regional security has been at the forefront of the Southern African Development Community (SADC) ambitions, rather than maintaining the pre-1994 focus on development (Schoemann, 2005).

Cannabis production has been one of the many resources (including diamonds, minerals, metals and timber) that have been implicated in some of the many conflicts on the continent of Africa. In particular, and despite its relatively recent introduction to the region, cannabis has been a key fundraiser for many belligerents in various West African conflicts, such as the separatist forces in Senegal's Casamance region, the Liberian civil war, and conflicts in Guinea-Bissau, Sierra Leone as well as in eastern and central African countries such as the Sudan, Chad, Uganda, the Democratic Republic of Congo and Rwanda (Chaigneau, 2002). A more complex case in the geopolitics of cannabis emerges in cases where governments have embarked on eradication programmes, ostensibly to curb production but in reality to gain a firmer grip of territories with insurgent tendencies. The Sudanese government, for example, carried out eradication programmes, with the support of the former United Nations Drug Control Programme (UNDCP) in the provinces of Darfur and

Bedja, where people are engaged in a struggle against the Islamic authorities in Khartoum (Labrousse, 2001).

One trend that has emerged in the aftermath of the apartheid regime in South Africa is the rapid infiltration of synthetic drugs, such as ecstasy, into the region as well as some local production of synthetic drugs (Cilliers, 2001)[7]. This process was facilitated by the sudden increase in free trade, the movement (both legal and illegal) of much larger numbers of people across the region's international borders, and an inadequate bureaucracy that was ill prepared to meet the new challenge (Baynham, 1998). The use of hard drugs, such as cocaine, heroin and ecstasy, is spreading fast among the region's urban centres and growing middle class populations (Leggett, 2002). There is evidence that synthetic drugs are effectively being bartered and exchanged for cannabis being shipped to Europe, and that the same gangs involved in exporting cannabis are involved with importing synthetic drugs (Laniel, 2001; Leggett, 2002).

The International Narcotics Control Board (INCB) note that cocaine from South America is now being trafficked in large quantities through Africa, enroute to European users (INCB, 2007). Russian, Nigerian and Israeli crime syndicates have all been connected with the flow of these drugs (Leggett, 2002). Along with this, cannabis from southern Africa has been arriving in Europe, where it can fetch high street prices. Ireland has been one port of entry for the European market with 45 South African nationals imprisoned in 2002 on drug trafficking convictions (IPS, 2003). Those imprisoned in Ireland were hired in South Africa by Nigerian gangs and through a series of stop-over destinations tried to conceal their point of origin and evade police detection (IFS, 2003). If the ploy is successful, profit margins for the smugglers of 4000% are possible (Thompson, 2003).

In contrast with central and southern Africa, there was little cannabis production in West Africa until the aftermath of World War Two, when cannabis

[7] During the apartheid era, mandrax had been trafficked into volume into South Africa but the pattern changed in the post-apartheid period to include synthetic substances, such as ecstasy (see Chan, 2007).

may have been introduced by returning soldiers (Bernstein, 1999). Sub-Saharan cannabis production remains focused on cannabis herb and according to the most recent annual report by the INCB (2007), seizures of cannabis herb in Africa have increased from 16% of total global seizures in the early 1990s to over 30% in 2004. The two largest producers of cannabis herb are South Africa and Nigeria, and South Africa is probably the world's leading producer (Labrousse & Laniel, 2001). One estimate put the annual value of the cannabis trade in the mid-90s in South Africa at US$4.5 billion (Gelbard, 1998), a figure that as one South African newspaper article noted would mean the South African drugs trade is four times the national budget for justice (Eliseev & Maughan, 2006). The high rate of consumption of cannabis within the southern African region has no doubt helped to deflect wider international attention from the region to areas that have been the traditional suppliers of European and American drug markets, at least until the last decade.

In many African states where cannabis is cultivated, the eradication of the trade is simply often not a policing priority where other more pressing criminal and security concerns exist (Gastrow, 2003). Similarly, for politicians, the potential political backlash that may follow from increased raids and a clampdown on a trade that provides a livelihood to many people is unappealing. While some pressure to curtail production may be felt in terms of their international obligations, many African states may in fact be only posturing rather than actually embarking on serious programmes of eradication (Gastrow, 2003).

Cannabis production in southern Africa

The history of cannabis production in southern Africa is marked by at least three phases. The first phase involved the small-scale cultivation of cannabis to meet the needs of customs and rituals that saw tribal elders smoking cannabis but apparently in moderation (Du Toit, 1975). The transition to the second phase, which is when cannabis was first cultivated as a cash crop, is harder to identify and varies within the region, but is likely to have been

associated with the establishment and expansion of the migrant labour system and the expansion of a cash economy into rural areas of southern Africa. Life in single sex male compounds at remote mining locations and urban townships created a demand for substances such as alcohol and cannabis that could be paid for with the wages received (Du Toit, 1980). Cultivation in this second phase however was principally concerned with meeting demand in the region, and especially within South Africa, where alcohol and cannabis were the principal substances available, due to the very limited supply and high cost of imported drugs such as heroin and cocaine (Leggett, 2002). The third and most recent phase began in the early 1990s, coinciding with the fall of the apartheid regime in South Africa as well as what had been a gradual decay of a formal migrant labour system. This period has seen a re-establishment of legitimate trade within and outside of the region and consequently greatly facilitated the development of South Africa and the region as an international hub in drug trafficking.

Research that engages specifically with communities growing cannabis in the region remains very sparse and where it does occur has often been quite superficial. The Kingdom of Swaziland is a significant grower that supplies the South African and international markets, with over 70% of smallholder farmers in the northern Hhohho region alone growing cannabis for sale (IRIN, 2004). With such proportions of rural communities dependent on the cannabis trade, feasibility studies for alternative uses of cannabis are being creatively examined with proposals including a promotion of legal hemp production to replace declining cotton production (Hall, 2003; IRIN, 2003; ARB, 2006) to commercialising old traditions of brick making using a cannabis, lime and water mixture (IRIN, 2006a).

South Africa maintains a longer record of observations. Du Toit (1980) traces the early historical records of cannabis in Africa before embarking on a detailed survey of cannabis use amongst different ethnic groups in South Africa, making reference, *inter alia*, the pre-1950s cannabis trade from Swaziland to South Africa. He notes many interesting observations on cannabis within South

Africa, making the point that cannabis use is predominantly a male pastime, as well as highlighting the dilemmas between traditional and modern conceptions of cannabis use:

> "Where the traditional system allows cannabis smoking and beer drinking as viable forms of social activity for mature adults, the modern government completely condemns cannabis. The modern system has also pressured the traditional lifestyle so that it is difficult to live even a marginal traditional life." (Du Toit, 1980:94)

Furthermore, in a survey of rural Africans, 9% admitted to resorting to extra-legal activities such as selling alcohol without a licence and growing cannabis to meet household expenditures (Du Toit, 1980:96), while following a more recent study in Pondoland, Eastern Cape province, Kepe (2003) highlighted the important role that social differences within rural communities play in determining who can successfully trade in cannabis. Lesotho has also been defined as a major international producer of cannabis (Gastrow, 2003), responsible for supplying other SADC countries, notably South Africa, in addition to a wider international market.

Besides some of the more obvious difficulties that arise when individuals, households or communities depend upon extra-legal livelihood activities, three that are peculiar to the context of cannabis in southern Africa need to be discussed further. The most important of these is the claim that an increase in cannabis production will result in a decline in food crop production and consequently leave the region, already succumbing to perennial hunger, further depleted of its food reserves (Cilliers, 2001; Labrousse, 2003; INCB, 2004). In this case the short-term economic benefits of cannabis production may ultimately be detrimental in the long run.

Another idea that has been cited in the literature that was followed up during the current research in Lesotho is that South African cannabis smugglers were recruiting communities to grow cannabis. Thus, rather than local communities identifying a viable livelihood strategy, it may have been proposed

and encouraged by outsiders, particularly syndicates of drug traders. Such control by syndicates would potentially affect price negotiations and the bargaining power of rural communities, both within South Africa and farther afield.

A final point to note is that South Africa functions for cannabis trade in the region much the same as for legal trade, with South Africa exporting manufactured commodities to the rest of the region and importing primary resources from the region, including cannabis, for example. Where in rural communities in Lesotho, Swaziland and Malawi cheap South African maize is available in local shops, cannabis from those communities is travelling to South Africa, although destined, of course, for the urban and industrial population centres. Laniel notes how:

> "...drugs are well-suited to play the role of 'hard currency': they are fairly cheap to produce, command a high sale price, are not subject to inflation (prohibition maintains floor prices and regulates over-production), are fairly easy to transport because of their small volume, and they can either be disposed of, for cash or other goods, on a growing regional consumer market or used in other regional or international transactions." (2001:411)

It is worth noting at this point that when viewing these flows of commodities, a commodity-chain approach is very useful to highlight both the physical distribution of the commodity but more importantly to ascertain how the value of the commodity changes, generally increasing from the point of production to the point of consumption. On a political note, it is also crucial to bear in mind the motivations of politicians and security forces in enforcing laws on cannabis prohibition, a crop that clearly brings much income to rural communities who are coping with the collapse of the formal migrant labour system, and who now languish amidst declining food crops and have very few employment opportunities.

A history of cannabis in Lesotho

In the opening to *A Short History of Lesotho* Gill (1993) alludes to the important role that cannabis may have played during the period of Sotho settlement in present day Lesotho. The San and their ancestors had been hunting and gathering in the region for thousands of years; their pictorial depictions of eland and other animals that roamed the region at the time are still visible on rock faces in Lesotho today. The gradual expansion of the Sotho and their mixed economy of crop farming, herding and hunting over the past three or four centuries, however, reduced the land available to the San. While some Sotho clans apparently employed methods such as intermarriage to forge allegiances with the San, other clans "such as the *koena*, have passed down oral traditions which display a rather patronising and 'colonial' mentality of how they 'bought' San land for a supply of dagga" (Gill, 1993:7). Such an occurrence would point not only to the cultivation of cannabis, but also to the existence of trade networks in cannabis as having been present for the past two or three centuries at least, and may have been a facilitating factor in the shift from a nomadic, hunting-and-gathering San to the more pastoral and agriculturally focused Sotho, when the cultivation of cannabis may have encouraged more permanent settlements to emerge.

One of the difficulties with a historical analysis of the literature from this period is the scarcity of available records. Even when written records become more widespread, especially when Lesotho became a protectorate under the colonial wing of Britain from 1868, there is little mention of the various crops that were planted. In later years, following international criminalisation of cannabis in 1925, colonial records focus on legitimate transactions for the purpose of taxation rather than illegitimate activities. Early proselytisers in Lesotho remain one of the main literary sources of information on Basotho life, written from the perspective of a missionary. Casalis (1889:141) notes that "in contrast to tobacco, the Basotho confess that the use of dagga, is much more

ancient". Aside from its use in cultural settings cannabis was also a food supplement (Guillarmod, 1971).

Most historical and ethnographic writings of the early twentieth century on the Basotho make only passing references to cannabis (for example, Ellenberger & MacGregor, 1912; Ashton, 1967) and focus almost exclusively on methods of smoking rather than, for example, the extent of cultivation. Only in much more recent times have the production and consumption of cannabis featured in greater detail in the literature. Whether this dearth of discussion before the past two decades can be taken as a sign that cannabis was not widely grown until relatively recently is open to debate, but oral sources and more recent literature suggests otherwise. Cannabis appears to have maintained a discreet presence that went relatively undetected or unmentioned in written records of the colonial era. Discussion was also evaded in literature generated by the development industry over the past three decades, which focused exclusively on licit agricultural activities. By the mid-80s, Gill (1993:236) notes, probably very conservatively, that "hundreds of enterprising farmers, unable to make ends meet and in need of a hearty cash crop which could withstand Lesotho's variable climate, turned to the growing of dagga which has become (unofficially) Lesotho's most lucrative cash crop". It was not until the mid-1990s that information on cannabis production began to appear in writing in the preparation studies for the second phase of the LHWP, one of the most ambitious engineering projects ever to take place on the African continent (see Plate 3.2). The purpose of the LHWP was to place several dams in the Lesotho highlands, capturing the relative abundance of water in the area and by means of transfer tunnels and channels, supply the Gauteng urban region in South Africa that includes the two cities of Pretoria and Johannesburg. Lesotho would then receive payment from South Africa for the water and a hydro-electric generator would meet the majority of Lesotho's electricity demands, as well provide additional revenue from energy exports to South Africa.

Large-scale dams have invited a lot of criticism in recent years in many regions of the world, such as the infamous Narmada dam in India (Baviskar,

2004) and, the Three Gorges in China (Heggelund, 2004). One of the principal arguments put forward by opponents of these large dams is that the social costs of displacing communities when their lands are flooded outweigh the benefits of large-scale dams. Other arguments focus on the ecological impact of such dams as well as their safety and suitability (Scudder, 2006). The erection of the dams at Katse and Mohale in Lesotho has also received much criticism.

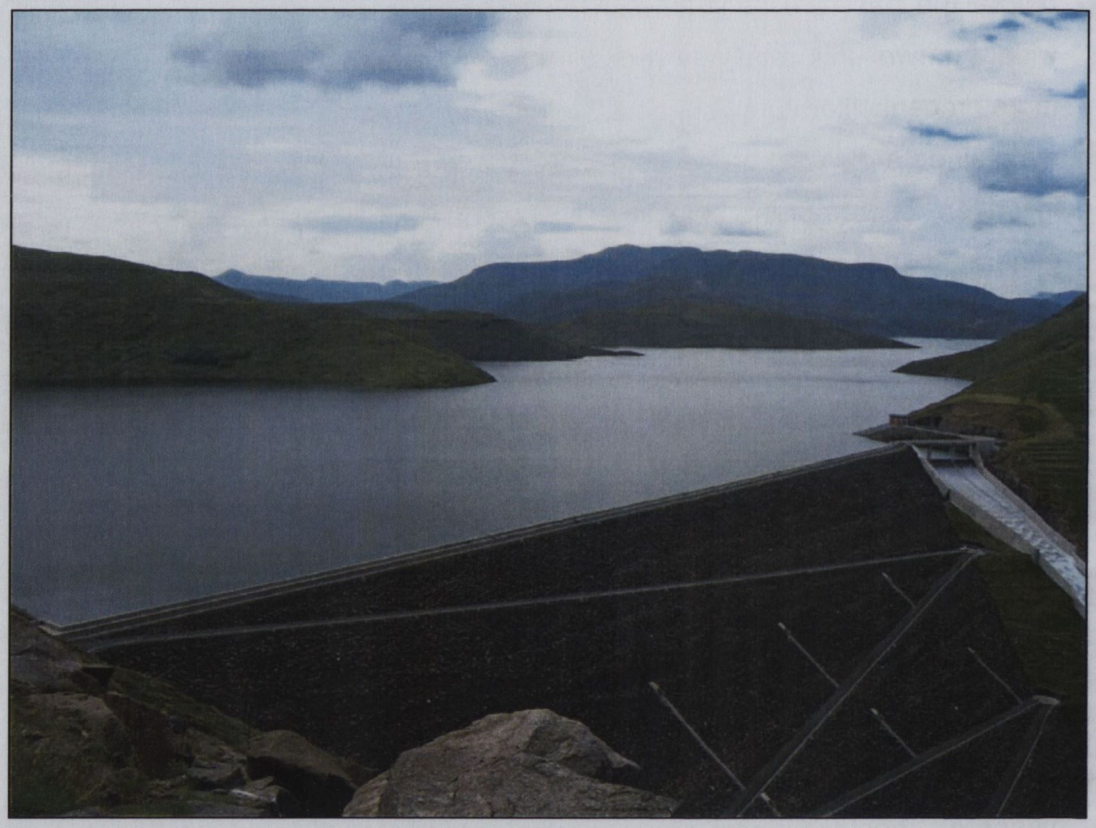


Plate 3.2 Mohale Dam, Lesotho, forming the second part of the first phase of the LHWP

In order to establish the parameters for the compensation to be given to households that were to be resettled, in-depth analysis of livelihoods and incomes in the affected areas were undertaken by research consultants. By the mid-90s Katse dam, the first phase of the LHWP, was nearing completion but

the reports from Phase 1A (Katse) did not allude to cannabis production in the area. In one survey from Phase 1B (Mohale), however, it was noted that: "marijuana production in both the Phase 1A and Phase 1B areas is reported to be an important source of income for many households" (LHWP, 1996a:19). The report went on to note that "because of the illegal nature of this crop, it is extremely difficult to measure the contribution it makes to the standard of living of people but it undoubtedly has had an impact" (LHWP, 1996a:19).

It is interesting to note that these references to cannabis were appearing in the LHWP surveys that were examining baseline epidemiology and medical services (LHWP, 1996a; 1996b), rather than in the context of a livelihoods or socio-economic report. A survey for Phase 1B revealed that 34.4% of households sold cannabis in comparison with 29.6% selling *joala* (home-brewed alcohol made from sorghum) and 3.3% who received an income from selling commercial beer (LHWP, 1996b:95). When the mean monthly incomes from these products were calculated, the two categories of marijuana and marijuana and alcohol brought in nearly 70% of households income.

Although the practicalities of getting a World Bank funded project to compensate farmers for the loss of revenue from illegal crops were not discussed, a third LHWP report stated that:

> "Marijuana is currently estimated to be cultivated on 10% of the arable land and accounts for 60% of the arable crop net revenue. Cash payment would therefore have to acknowledge this, if the principle of maintaining the incomes of people whose lives are disrupted is to be maintained." (LHWP, 1996c:57)

The authors of the report went on to propose compensation that would combine the loss of income from grains (such as maize, sorghum and wheat) as well as for cannabis based on a total one-hectare plot (LHWP, 1996c:57) :

900 kg of grain @ M1.19 per kg on 0.9 Hectares[8] M1071

[8] Maloti (M) is the currency in Lesotho. The exchange rate on 23rd October 2007 was 1 Lesotho Loti to € 0.105 (Website: http://www.xe.com). For simplication in this thesis, a notional rounded-off rate of M1 = €0.10 (or €1 = M10) is suggested for ease of calculation. As the Lesotho Maloti

plus net revenue from 0.1 Hectare marijuana	M474
Total	M1545

Under this proposed compensation scheme almost one-third of the monies given to compensate for loss of income and food crops would have been solely for cannabis.

An environmental impact assessment report produced the following year for the same area estimated that cannabis was grown by about 70% of farmers (LHWP, 1997:4-52). This represents a very large discrepancy with the report just mentioned, which found 34.4% of households selling cannabis, especially since only 18.9% of male respondents claimed to have ever smoked cannabis (LHWP, 1996b:96), so the difference cannot be explained by domestic consumption. The report however also estimated yields of approximately 100 kilograms of cannabis per hectare (LHWP, 1997:4-54), although the estimate is low according to Leggett (2006b), who believes a hectare of cannabis in Lesotho should yield around 1 MT of saleable product based on fieldwork in the South African provinces surrounding Lesotho.

Oral testimonies from the members of the affected communities at Mohale were gathered prior to the informants' resettlement (Panos, 1997). These testimonies provide an insight as to the likely impact of resettlement on livelihoods. Over half of the interviewees discussed how they grew and sold *khomo ea fats'e* (literally 'the cow of the ground' – cannabis) and what an important part of their livelihood portfolio it was:

> "People always come here to buy cannabis from us, and it helps us a lot because with it we are able to pay our children's school fees and maintain our families. Cannabis is really important to us. Even during Christmas our children are able to have new clothes, such that an outsider may even think we are employed."
>
> (Thabang, male, age 57, farmer – Panos Institute, 1997)

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and South African Rand (R) are linked at the same rate, the same rate of exchange is used when calculating values present in Rand.

"You understand that cannabis is actually the wealth of this land. Even though, truly, somewhere it is said, that it is a thing which is a mistake; yes it is a mistake, because truly in law, it is a thing which is like a diamond, which you cannot use outside of the law. But then, as for it, it is true that we live on it."

(Nathnael, male, age 61, farmer – Panos Institute, 1997)

Although one of the respondents felt differently:

"As for [cannabis] I see it as a thing that wastes my time because I will gather it and put it in the house in here and then it would happen that it is not bought, and then the rats would be eating it in the house in here. And then it would happen that much much later when they come, those people who want [to buy] it, it would then ... maybe it would even happen that he brings me 100 *rands* or 80 *rands* and he would be saying he wants a bag, yet this thing [is worth more because] I would have planted it with difficulties and even harvested it with difficulties."

(Tokiso, male, age 36, farmer– Panos Institute, 1997)

The twenty interviews where cannabis production is discussed in the Mohale area provide a detailed explanation of how the crop was grown and how it was sold. It is clear from many of the interviews that the police were not too much of a concern for most farmers, although it is very interesting to note a disassociation between crime and cannabis cultivation:

"In the middle of time here you find us still living on this same *matekoane* [cannabis], which we keep selling here to avoid the matter that a person you should go and break-in, do these senseless things of theft."

(Mohlominyane, male, age 61, farmer/village headman – Panos Institute, 1997)

Later on Mohlominyane discusses this again:

> "As for us, we live on cannabis here. I live on cannabis here. Me, I do not steal and in fact I will even die without ever having stolen. I live on cannabis. I sell cannabis. On the twelfth month I harvest, I sell. When I finish selling this cannabis of mine, I take my child to school." (Mohlominyane –as above)

Also evident from the interviews are the concerns that people had with regard to how their livelihood strategies might change following resettlement, with the majority moving to the much more densely populated lowlands. Cannabis was such an important aspect of their livelihood portfolio that whether or not they could continue to cultivate "greatly influenced some of the resettlee's choice of new homes" (Thabane, 2000:638), such as Moleleki's view:

> "I am looking at whether there are a lot of fields. They are many, even though they do not do anything, because people just live on cannabis. I am just looking whether there is a place were I can sow tobacco on top of the plateaus there."
>
> (Moleleki, male, age 41, farmer – Panos Institute, 1997)

When asked how people in the village feel about being resettled, Makibinyane explains:

> "Everybody is unhappy about it. I do not know what life is going to be like in the new areas. I do not know the level of crime there, whether we will be accepted by the people there. I wonder if I will be able to grow my cannabis. We all feel like we are being robbed but there is nothing we can do."
>
> (Makibinyane, male, age 40, farmer – Panos Institute, 1997)

How the compensation plan for resettlement finally dealt with the issue of cannabis remains unclear. Anecdotal evidence hinted at a provision being made for a category of income earned from other crops. Hoover, who lived with

the affected communities after resettlement, maintains "another serious deficiency of the compensation plan resulted from the failure to compensate for Lesotho's most valuable cash crop, marijuana" (2001:26). A more recent survey by the Lesotho-based Transformation Resource Centre focused on how livelihoods have been affected by the resettlement (TRC, 2003). It noted that the standard of living for most the those who were resettled had declined since resettlement began. The primary reason for this being that those whose livelihood strategies had been affected were frequently not able to adopt alternative strategies in their resettled places. The report poignantly notes that the most important losses were in land, livestock, herbs and cannabis, and attributed loss of the latter to lack of land and proximity of the police in resettled areas (TRC, 2003). At the southern African hearings for communities affected by large dams in Cape Town in 1999, one resettled community member from the Mohale area lamented:

> "We were planting maize, wheat and everything that sustains our lives, especially marijuana. We know this substance is illegal, but it enables us to send our children to school. In other words we were planting money, literally." (Moepi, 1999:1)

It is very difficult, for obvious reasons, to establish accurately the importance of cannabis production as a livelihood strategy and the geography of its cultivation in Lesotho. While it does show up in the nationwide livelihood surveys, estimates of the percentage of households growing cannabis are undoubtedly grossly underestimated due to non-disclosure. Gay and Hall (2000), for example, found that 1.5% of households were involved in selling cannabis, although such national estimates hide the fact that cannabis growing is concentrated in pockets of mass production around the country. Turner (2001:95) makes the comment that "the most lucrative cash crop of all, dagga [cannabis], shows up in the livelihood strategies of the whole spectrum of rural households. Legalisation of the herb in South Africa could be catastrophic for

Lesotho livelihoods".[9] According to Laniel (1998), the main areas of cannabis production in Lesotho are the high mountain zones in the centre and east of the country, as well as in the western foothills region and in the Senqu River valley.

There is no mention of cannabis in official agricultural reports such as the *National Situation Report* (BOS, 2002) or official crop surveys (BOS, 2004). One might ask what is the true value of such reports if cannabis, the most lucrative cash crop in the country, is omitted? Rural development programmes and emergency food distribution programmes (such as LVAC, 2006a) rely on accurate agricultural data, so how does the exclusion of an important cash crop affect the importance of a programme or more fundamentally undermine the basis of entire programmes?

The cultivation of cannabis in Lesotho can be attributed to a range of physical, social, economic and political factors. Estimating the individual contribution that these factors have made to the cultivation of cannabis is, however, very difficult. Some of the potential causal factors include: the retrenchment of mineworkers from South Africa and the soaring unemployment rates that resulted from this mean that alternative sources of cash need to be found (Boehm, 2003a); the tighter border and work permit regulations for Basotho entering South Africa have further reduced the opportunities across the border (IRIN, 2006b); limited availability of agricultural land in Lesotho could also mean that people are turning to cannabis to increase their returns from the land; declining levels of soil fertility as a result of monocropping practices and overuse that may make the hardy cannabis plant a more suitable option (ODI, 2004); and the rising costs associated with the HIV-AIDS epidemic (Mothibi, 2003). Yet, as this study highlights, the role of social institutions as well as other institutional structures play a vital role in facilitating this trade.

Without the chieftaincy (and more recently the local government) being complicit in the cannabis trade, or at least not being proactive against it, then it

[9] While arguments have been put forward in South Africa with regard to the benefits of legalising cannabis, the Central Drug Authority has ruled out the decriminalisation of cannabis for the moment. Proponents of legalisation cite the considerable law enforcement savings that could be made as well as recommending more research on the potential for medical uses of cannabis (Anon, 2004).

cannot function. Similarly the community needs to have mechanisms to operate an illegal market and where these have been developed and maintained, cannabis production can occur. The often complicit role of the police (as well as border officials and others involved in law enforcement and customs duties) in the cannabis trade is also crucial to its functioning and as Laniel notes, "cannabis is a very open secret and enjoys de facto de-criminalisation – [although] it nevertheless remains a very private activity" (1998:3).

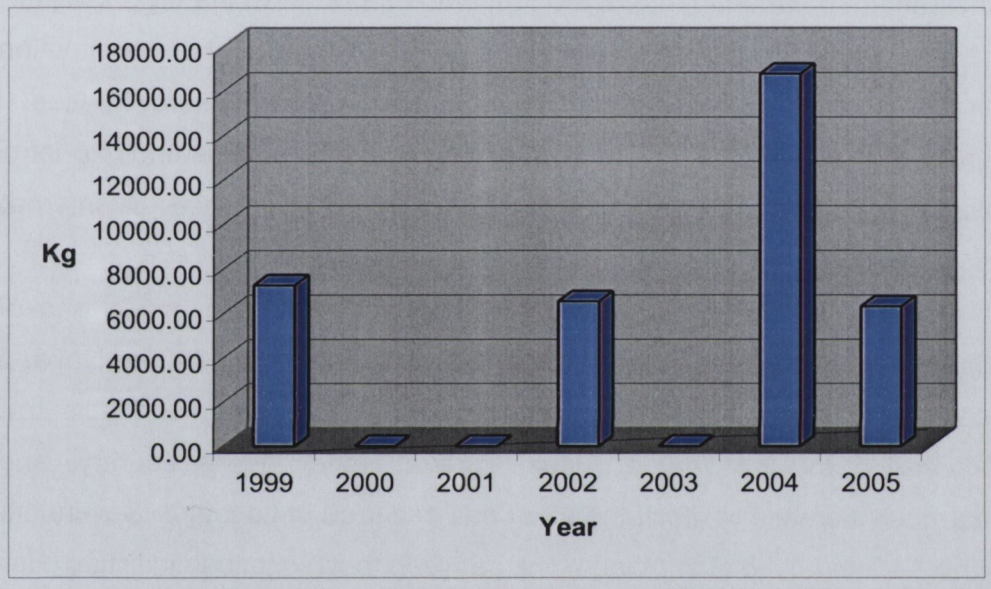


Fig. 3.3 Cannabis seizures in Lesotho: 1999 – 2005: no data available for 2000, 2001 or 2003 (UNODC, 2007b)

Since no reliable estimates are available for the amount of cannabis cultivated within the country, official figures depend primarily on seizures of cannabis, which vary very dramatically from year to year (see Fig. 3.3) with a massive increase in 2004 but then a fall again to previous levels in 2005. The reasons for such disparities in seizures existing between the years are not easy to identify but points towards an increase in police activity, or an increase in volume of trafficking. A seizure of cannabis with an estimated street value of M2,400,000 was recently reported (SAPA, 2006) and a M500,000 seizure that was being smuggled inside a police vehicle (SAPA, 2007a). A note of caution

is warranted with regard to media reports and the monetary values of cannabis seized since these values are based on high street-level estimates, which are probably considerably more than the amounts that growers and mid-level smugglers would receive for the product. In its 2006 annual report the INCB note that in one joint operation involving the South African Police Service (SAPS) and the Lesotho Mounted Police Service (LMPS) during July 2006, 47 tons of cannabis were seized (INCB, 2007:38).

Cannabis is currently regulated under the Dangerous Medicines Act of 1973 (GOL, 1978). The INCB (2006) notes the efforts made by the Government of Lesotho in drug control in the report from the organisation's first mission to Lesotho in August 2005 that reviewed the drug control situation and the Government's compliance with the international drug control treaties. In its report the INCB (2006) urged the Government of Lesotho to introduce alternative development programmes, with the assistance of international donors.

One persistent theme that emerges from both the media and official sources in Lesotho (e.g., Hall, 2002; Taylor, 2002; Anon, 2003; Nyaka, 2004; Thai, 2004; Nyaphisi, 2005; Chikuvira, 2006) is that the cannabis trade is responsible for the flow of illegal firearms entering the country, and the enormous increase in stock theft that has occurred in Lesotho. Several studies within Lesotho have also made a link between these criminal activities (Hennop, 2001; Kynoch & Ulicki, 2001; TRC, 2004; Dzimba & Matooane, 2005). Focusing on the southern districts of Quthing and Qacha's Nek, Kynoch and Uliki (2001) note that stock theft is an important part of an extra-legal economy that also involves arms trafficking and drug smuggling and is directly responsible for a majority of murders in the area. Some commentators have sought to distinguish between the participants involved in these different extra-legal activities by regarding cannabis production as a genuinely poverty-driven activity as opposed to stock theft, which enriches select individuals (Phororo, 1999).

Examining the issue on the Drakensburg border in eastern Lesotho, Hennop (2001) noted that the movement of cannabis into South Africa was occurring on the same routes as those used to move stolen livestock across the border. Interestingly, the SAPS and South African military had suspicions that firearms were being directly exchanged for livestock and for cannabis (Hennop, 2001). This is important because if there is no definitive and widespread link between these activities, especially the exchange of firearms for cannabis, then it represents a myth manufactured by media, politicians and police press offices to falsify or exaggerate information concerning the cannabis trade. Perhaps, however, it is more plausible that the linkages were just accepted without much investigation and became received wisdom.

The danger in all of this is that studies focus on cannabis production as a purely criminal activity, rather than a livelihoods strategy that is supporting rural communities. In order to embark on any path, whether it be legalisation or so-called alternative development, it is vital that cannabis cultivation be understood first and foremost as a livelihood strategy. Only then should a plan for the future be constructed and embarked upon. The first obstacle to such a move that has to be overcome is the fact that so few written records deal with the issue of cannabis and rural livelihoods in Lesotho.

3.3 Rural livelihoods in Lesotho

3.3.1 Hoe and wage: agriculture and labour migration in rural Lesotho[10]

The combination of hoe and wage, or perhaps more accurately, wage and hoe, has been the foundation of rural livelihoods in Lesotho for at least one hundred years, although Basotho workers were migrating to work in South Africa as early as the 1820s (Kimble, 1978). While Murray's assessment of Basotho being essentially a "rural proletariat which scratches about on the land" (1981:19) still generally holds true for the majority of Lesotho's inhabitants today, the socio-economic and political contexts have changed dramatically.

[10] 'Hoe and wage' heading taken from book title by Cordell *et al* (1998)

Before examining the contemporary context of livelihood pathways in rural Lesotho in the next section, it is important to understand the impact that migrant labour had on rural life and agricultural production in Lesotho.

The impact of migrant labour in Lesotho has been the focus of many studies and research projects. Two of most important occurred in the late 1970s when Murray (1981) and Spiegel (1980) both put forward the household developmental cycle as a model to understand wealth accumulation and decumulation during a household's lifecycle. As Murray (1981:41) describes it:

> "Individual labour histories are variations on a basic single theme: the repetitive movement between a rural home in Lesotho and an industrial centre in South Africa. The paradigm of the successful migrant career for a man is to establish his own household and to build up a capital base, through the acquisition of land, livestock and equipment, to enable him to retire from migrant labour and to maintain an independent livelihood at home."

Yet few households were able to achieve such independence, and particularly so once recruitment practices began to change in the 1990s (Spiegel, 2005). Neither was the incidence of migrancy greatest among the less well off (Spiegel, 1980). Remittances from the industrial centres of South Africa had a vital importance within rural communities. The same system of migrant labour, however, placed an almost impossible burden on other social institutions, especially marriage (Murray, 1981)

Some aspects of rural life adapted to the migrant system, for example, the practice of *bohali* or bride payments or wealth. The settlement of bride payments could take many years to fulfil and so marriage was essentially an institution that was also entwined in long-term economic responsibilities with the bride's family receiving periodic instalments. A wage income was necessary to purchase the cattle required to make the payments although in latter years the *bohali* has been paid using a combination of cattle and cash. The migrant labour system has often been accused of causing massive social disruption within the household, given the high levels of extra-marital infidelity that

occurred, both in areas of out-migration and in-migration. Yet women were dependent on remittances to maintain the household as her own family were on the payments of *bohali* and as Langston noted, "a woman's economic dependency on her husband is often the most important factor sustaining the marriage" (1993:77). Two important issues arise from this in the context of the current situation in Lesotho, namely the reluctance of women to enter into conjugal relationships with unemployed men and the spread of the HIV-AIDS pandemic as a result of high levels of extra-marital infidelity.

The absence of men also led to a "feminisation of agriculture" (Ellis, 2000:149). In the case of Lesotho, Eldredge (1991) postulates that even during the wheat booms of the nineteenth century women were still the primary agricultural producers. Indeed "women's efforts in cultivating a grain surplus were one of the few ways in which they could exercise some control over their own fate" (Eldredge, 1991:726). So while the feminisation of agriculture was not new, neither did it translate to more control over household economies.

Towards the end of the colonial period in Lesotho women were obliged to remain in rural areas and deterred from travelling to South Africa[11]. Along with the myth of self-sustaining subsistence production, this provided a fundamental rationale for men's low wages in the mines, justified by the mining companies by saying that a migrant's wage was merely a contribution to a largely self-sufficient household economy (Epprecht, 1995). While women bore the responsibilities of agricultural production and child rearing then they were still regarded, according to customary marriage laws, as "children of their husbands" (Mphi, 1994:945). Inheritance laws forbade widows to inherit their husband's land although in practice women often retained land at the discretion of the chief or through their eldest son. Gordon (1981) noted that there are at least two schools of thought regarding the impact of labour migration on the lives of women left behind. The first perspective regards the situation as having become a cultural norm and the *status quo* was just accepted. A second

[11] Female migration from Basutoland to South Africa was actually made illegal by the South African government in 1962. At that time women accounted for 25% of Basotho migrants (Coplan, 1991:171).

perspective relates to the perceived emancipation of women as a result of them being in control of the household and not being subdued by the continual presence of their husbands. Gordon (1981) felt, however, that her research supported a more negative view and that, although a wife was given the responsibility of carrying out family affairs, her actions were severely limited and important decision making still rested with the male head of the household.

Aside from the serious social costs for the community as a result of migrant labour, the fact remains that families with remittances as their main source of income have the lowest incidence of poverty (Gustafsson & Makonnen, 1993). In the early 1990s only 6% of average disposable household income came from agriculture, despite the employment of 92% of the resident workforce in farming and animal husbandry (Coplan, 1991:170). Aside from households with very young or very old heads of households, one group of households fares particularly badly: female-headed households. Resulting from a high mortality rate among miners as well as socio-economic difficulties of remarrying if one is widowed, Lesotho has among the highest proportions of female-headed households in LDCs and the most widows (Gustafsson & Makonnen, 1993), with over two-thirds of female-headed households classed as poor.

The earnings of Basotho mineworkers have sustained agricultural production through the ability to purchase inputs and enabled some landless families who received remittances to engage in sharecropping arrangements with those who had land but no cash income. As a result, farming in Lesotho became remittance-reliant, making it difficult for those without cash, including redundant mine workers, to farm successfully (Boehm, 2004). Indeed it is not just the migrants and their immediate dependents that subsist on remittances but also the migrant population. The agricultural sector does not employ most of the non-migrants, as Mochebelele and Winter-Nelson (2000) suggest, but rather the non-migrants live off remittances too by means of diffusion of remittances through the community, as identified by Spiegel (1980). Furthermore, the commodification of rural life did not just apply to agricultural

production, but included natural resources: "buying and selling everything from crop residues for thatching to several varieties of animal dung for fuel" (Wisner, 1987:26) was common by the mid-80s.

The large cash inputs from remittances had already been highlighted as being a crucial factor in successful agricultural production in Lesotho. While remittances previously represented the economic backbone of Basotho rural communities, Boehm describes farming as the "social backbone" (Boehm, 2003:19). By weighing up monetary inputs and crop outputs, Boehm (2004) clearly demonstrates the economic irrationality of farming, in terms of the cost of inputs, for most farmers in Lesotho, yet they still continue to farm, and he deduces that farming is not only a type of social performance but also a moral one.

Two distinctive forms of sharecropping have been identified in Lesotho and this duality as Robertson (1987) notes in his detailed study of the subject is reflected in separate words describing the two forms. *Seahlolo* is regarded as a long-established practice amongst the Basotho and has "connotations of equitable apportionment" (Robertson, 1987:128) and has been viewed as a social mechanism for the distribution of wealth. *Lihalefote* on the other hand is derived from the Afrikaans *halfte* or half and is a more businesslike arrangement, indicating an economically rational division of the tasks and crops. Older households often headed by widows, who may have access to land but lack capital, represent the archetypal lessor in share contracts. The archetypal lessee was usually a younger male householder, usually a migrant worker who may have capital but insufficient land. A safe assumption might be then that if there is a massive decline in labour migration opportunities and inflows of remittances then such arrangements would be less likely to occur.

Other common sharing mechanisms that prevailed in the past in Lesotho include *letsema* and *mafisa*. The first refers to a co-operative work party that is called to carry out a variety of agricultural work such as digging, sowing, harvesting and so forth. The *letsema* has been a consistent theme in texts examining life in Lesotho (Casalis, 1889; Ashton, 1967) and all note that they

are "gay, sociable affairs" (Ashton, 1967:131) where, after completion of the task, people are served with home-brewed beer and food. The sharing of produce with the poorer members of a community also had an important distributive function. The second mechanism, *mafisa*, is also a very old practice where one household entrusts another with the long-term care of some or all of the household's livestock. The new custodians have the right to use the animals as well as consume their produce and, in some cases, may keep offspring while the animals are in their possession.

In 2004 Turner was able to return to a village in the foothills of Maseru district where he had originally undertaken fieldwork in 1976 on farming in Lesotho (Turner, 1978) and review how sharing mechanisms had altered in the twenty-eight year interval. He found that, as in the 1970s, very little distinction was made by informants between the two types of sharecropping that Robertson identified – *seahlolo* and *lihalefote*. Over the twenty-eight years it seems that sharecropping arrangements had perhaps changed the least. However, he notes that a broader range of partners was involved than the stereotypical contract between an old widow and younger man (Turner, 2005:44). On the other hand *matsema*[12] no longer happen and have been replaced by an alternative arrangement that is field labour for cash (*ho koropa*). This is further subdivided into categories depending on the task being carried out, but the payment was standard – about one basin of grain per day (Turner, 2005:50). 21% of households surveyed reported that they held *mafisa* cattle for various relatives. The final system of sharing, namely *mafisa*, was still in use and had not yet declined, although it had become limited to cattle rather than other livestock. Overall, Turner (2005) notes that many sharing mechanisms are still in place, but adds that there is evidence of increased vulnerability.

[12] Plural of *letsema*

3.3.2 Home from the mines: challenges to rural livelihoods in the aftermath of retrenchment

Retrenchment and its social impacts

By the early 1980s it had become clear that Lesotho was "acutely vulnerable to the threat of mass unemployment" (Murray, 1981:22). By the end of that decade a process of retrenchment, involving a decline in the number of foreign mine workers being employed in South Africa, had begun in earnest. Westermann (1999) identified six causal factors for the retrenchment of Basotho mineworkers: falling gold prices as well as a decline in demand; declining ore grades per ton in the South African mines; escalating work costs; a restructuring of the mining industry; increased mechanisation; and finally a desire within the mining industry to become less dependent on foreign labour. Added to this was the impact that economic sanctions were having on South Africa and the unsettled political climate that prevailed before the country moved to have democratic elections (Sweetman, 1995).

Two major periods of retrenchment occurred, the first after the 1987 National Union of Mineworkers strike, which resulted in the dismissal of almost 10,000 Basotho workers (Thabane, 1995), and the second during the early 1990s (Coplan & Thoahloane, 1995). An identity crisis has ensued for miners who returned to Lesotho and whose skills are not readily marketable, as they often lack the financial capital to attempt even subsistence farming. Mine work was "conceptualised as a test of manly courage and endurance comparable to the cattle-raiding and warfare of earlier historical periods" (Coplan, 1987:415). Combined with greater freedom to move about and more employment opportunities in the textile factories in Maseru and other lowland border towns, women were able to attempt to earn a wage (Baylies & Wright, 1993). As Sweetman (1995:16) noted:

> "Retrenchment shatters the rigidity of the male: urban: production paradigm, exposing it as an economic construct rather than a

natural 'given'. Economic crisis following the loss of mine remittance may allow – and/or oblige – women to challenge the exclusive right of males to participate in production."

The appearance of men in sectors that had been the traditional preserve of women, such as beer brewing (Mapetla & Machai, 1998) as well as agricultural tasks such as weeding, demonstrates that the sexual division of labour adjusted to accommodate both unemployed men and potentially employable women (Matobo & Makaoe, 2000).

High levels of domestic violence have long been an issue in Lesotho, often partly but not completely attributed to the migrant labour system itself (Gordon, 1981; Langston, 1993). The post-retrenchment adjustments in the division of labour and the challenge to male identity have led to an escalation in domestic violence. The escalating levels of violence as well as the scarcity of employed men has resulted in women questioning the value of marriage. When they can support themselves and their children without the restrictions and abuse often found in marriage, many now appear to be choosing to delay marriage (Dyer, 2001).

Agricultural productivity and environmental degradation

Average agricultural productivity yields have been in decline over at least the past four decades in Lesotho (Gay & Hall, 2000). The development industry has focused almost exclusively on raising agricultural yields, as it was viewed as the key to breaking the nation's dependency on South African food imports. As in many other parts of Africa, cash crops were experimented with but these experiments failed and the crop yields continued to decline.

The causes of this decline in agricultural yields are several. Gay and Hall (2000) identify three factors, all related to the degradation of soils: the loss of organic matter in soils as a result of monocropping of maize; the overuse of chemical fertilisers; and inappropriate tillage methods, particularly tractor ploughing, which has led to disastrous rates of soil erosion in the highly

sensitive duplex soils[13]. Soil erosion has been a consistent theme in Lesotho, with colonial interest being sparked off by Pim's (1935) report. Anti-erosion measures focused largely on technocratic approaches and blamed local land management practices. Several researchers have since re-examined the political economy of soil erosion in Lesotho. They have determined that political factors and relations with South Africa have heavily influenced the policies adopted by the colonial government, rather than the reality of environmental conditions (Showers, 1989; Driver, 1999; McCann, 1999). While received wisdom pointed towards poor land management practices, others have identified the introduction of the plough and the switch from indigenous agriculture to commercial cultivation as having "the greatest influence in altering the cover and rendering the land more vulnerable to soil erosion" (Singh, 2000:65).

In recent years the issue of environmental change and agricultural production has focused on the emerging patterns of rainfall variability, where intense, destructive rainfalls often follow long periods of drought. In 2002 a region-wide food crisis was declared and governments across the region pointed to drought as the primary causal factor. The drought scenario, however, merely "obscurses the issue of HIV-AIDS and other causal factors of food insecurity in Lesotho" (Van den Boogaard *et al*, 2004:5). As a regional report for the causes of the crisis by the NGO Christian Aid noted, the real causal factors were: chronic poverty, poor governance, HIV-AIDS, little support for agriculture and lack of foreign exchange (Lambrechts & Barry, 2003). Rather then than follow a path of climatic determinism to explain the rising levels of food insecurity, "the situation must be viewed within the significant longer term growth in the vulnerability of poor people in Lesotho" (Abbott, 2002:2). The situation is exacerbated by the very fact that the poorest households have been those most dependent on crop production and livestock (Gay & Hall, 2000). Indeed the claim that the decline in crop production and the

[13] Duplex soil is a soil type with a porous topsoil on top of a non-porous layer of soil, usually sand over clay.

increase in rainfall variability are directly correlated is not borne out in a statistical examination, as Phororo (1999) notes, except for the 1987/88 season.

Another factor blamed for environmental degradation is that the stocking rates of livestock, particularly cattle, are exceeding the carrying capacity of the rangelands. Development industry narratives have long declared overstocking as a prime cause of environmental degradation in African grasslands, although it is a narrative that has been challenged repeatedly (Scoones, 1996; Bassett & Zuéli, 2003; Turner, 2003). Estimates of how much the stocking rate exceeds capacity in Lesotho have varied from between 10-25% (Phororo, 1999) to three times the capacity (Kakonge, 2002). Others who have critically examined these narratives in the Lesotho context feel differently. Quinlan (1994) criticises the development agencies for trying to implement schemes such as establishing rangeland management areas without taking on-board local knowledge. Similarly Sibanda (2003) dismisses the technocratic solutions that were adopted for dealing with environmental degradation.

The impact of HIV-AIDS on rural households in Lesotho

UNAIDS currently estimates that over 23% of the population in Lesotho have contracted HIV-AIDS (UNAIDS, 2006). This places Lesotho as having one of the highest rates in both southern Africa and the world. The impacts of the epidemic across the southern African region are enormous in terms of both the direct costs from loss of life and affected families to the wider social, economic and political impacts on society. Given the stigma associated with the illness however and its often hidden nature, much detailed research remains to be done to understand its true implications, particularly at the community and household level.

Within southern Africa, it has been argued that the migrant labour system provided excellent conditions for the spread of HIV-AIDS, especially as a result of the high levels of extra-marital sexual relationships that occurred both for women who remained in the rural peripheries and for the men in the industrial

centres (Barnett & Blaikie, 1992:168; IOM, 2002). The coping mechanisms that households have adopted to deal with increased vulnerability arising from the threat of HIV-AIDS have become an important focus of research. Some are sceptical about this focus, however (Rugalema, 2000). Certainly there is a need to understand how these coping strategies are dependent on wider structural forces as well as remembering that HIV-AIDS is primarily affecting the most productive age cohort (15-50 years old) in society (Baylies, 2002:619). Another important focus that often appears to be missed in the discussion of coping strategies are those households that have not managed to cope and were unable to sustain themselves and are no more. The holistic impact of HIV-AIDS on communities is quite unlike other shocks such as food insecurity (Baylies, 2002).

Within Lesotho, malnutrition appears to be accelerating deaths from HIV-AIDS (Mothibi, 2003). Even in the case of anti-retroviral medication being obtained, a nutritious diet is essential to prevent a patient succumbing to HIV-AIDS. Yet maintaining such a diet is made much more difficult when the productive age cohort that would normally be involved in either agricultural production or wage labour is no longer able to work. The downward spiral of "capital-stripping" (Gay, 2004:34) for many households affected by HIV-AIDS is quickly eroding communities' social resilience. The disposal of productive assets such as land, equipment and tools; the reduction of the amount of land farmed; and changes in the types of crops farmed have very serious negative implications for the maintenance of a sustainable livelihoods portfolio (Mphale *et al*, 2002:13). As Drimie observes, "HIV/AIDS has a tremendous effect on those left living, as there are many more affected than infected people" (2003:648). Similarly Gay (2004:34) recognises that "as food production goes down, as employment drops, and as AIDS-related deaths of people in their productive adult years increase, then society may reach the point where the not-so-poor are no longer able to care for the truly poor".

Traditional social mechanisms, such as the Sesotho concept of *thoto*, in which relatives inherit the deceased's burden, are no longer as commonplace

(Mphale & Rwambali, 2003). Migration of orphaned children continues at a dramatic rate, with grandparents frequently incorporating orphaned grandchildren into their household (Young & Ansell, 2003) and then having to find the resources to feed, clothe and educate them. The burial process itself is also responsible for the utilisation of critical resources and as Matabo notes, "burying the dead in Lesotho has become more of a ceremony than bereavement in that death tends to be as costly as a wedding" (1998:54). While it is difficult, especially as a cultural outsider, to comment on cultural practices such as burial customs, it appears that expensive funerals strip away essential resources at a critical juncture, when a household is attempting to survive.

Changing livelihoods: surviving shocks and stresses in rural Lesotho

> "Change in Lesotho is so rapid that almost all sociological data requires continuous updating." (Coplan, 1994:160)

Recent surveys of livelihoods in Lesotho have been differentiated according to up to six agro-ecological zones: lowland; foothills; mountain; and the Senqu River valley as well as upper mountain valleys and high mountain region (see Fig. 3.4). Urban and the sprawling peri-urban areas are also considered separately from rural areas, although strong linkages exist between urban and rural areas and remittances from urban areas within Lesotho to rural areas are still very important. According to a longitudinal study that has monitored changing livelihood patterns from 1990 (Gay & Hall, 1991; 1994; 2000), 68% of the population was termed 'poor'[14] and 66% was classified as 'rural' (Gay & Hall, 2000). With regard to the exceptionally strong economic growth that had characterised the mid-1990s in Lesotho[15], Gay and Hall (2000)

[14] The classification of 'poor' referred to a maximum cash income of M80 per household member per month made on the basis of interviews with poor people about the minimum basket of supplies that was required in order to maintain the household (Gay & Hall, 2000).

[15] Growth in both the textile industry and the implementation of Phase 1A and 1B of the Lesotho Highlands Water Project played a major role in this economic growth. The growth rate

concluded that economic benefits did not tend to filter down through the economy to the poorer households or affect the incidence of poverty. Moreover, according to Turner (2001) strategies that actually sustain the poor, such as the brewing of alcohol and the farming of marginal lands, are responsible for many problems impacting Lesotho.

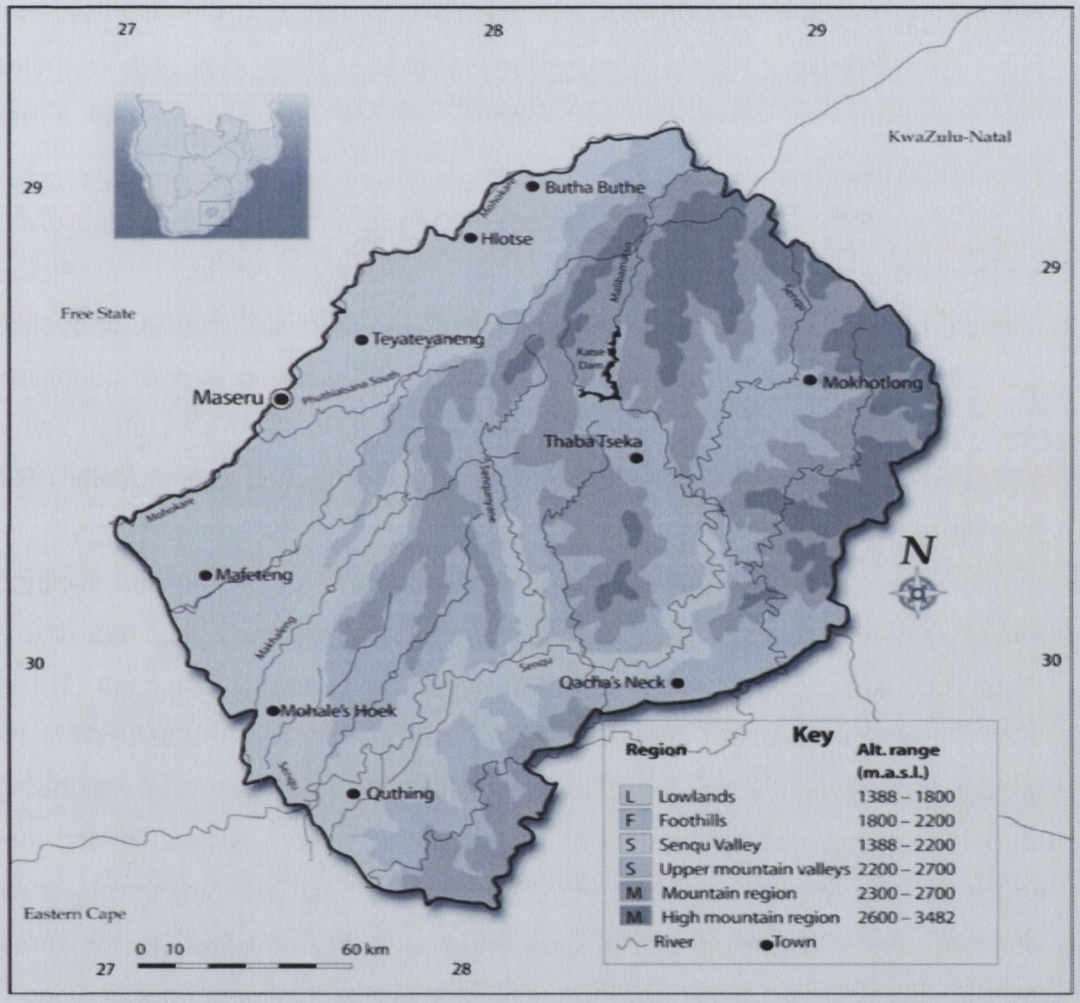


Fig. 3.4 Topographical map of Lesotho showing main agro-ecological zones (adapted from Kobisi, 2005)

collapsed though in 1998 in the aftermath of political disturbances and the intervention of a SADC peacekeeping force led by South Africa and Botswana (Gay & Hall, 2000:37).

Stock theft is another example of an extra-legal livelihood that, while no doubt it provides an important livelihood for those participating, has become a significant problem for many areas in Lesotho and can lead to drastic consequences for affected rural households. In a survey of stock theft in the southern districts of Lesotho, Kynoch and Ulicki (2000) found that 71% of the stockowners they interviewed had stock stolen in the preceding decade, and linked stock theft to recent reduced opportunities for migrant labour. As in many other areas of eastern and southern Africa, cattle in Lesotho represent one of the principle assets of rural households. Their loss is nonetheless devasting and has led to the keeping of livestock being viewed as a risky investment (Boehm, 2000).

Yet another important extra-legal livelihood strategy that is also under-researched is the issue of Basotho working unofficially in South Africa. Figures of such movements are of course very difficult to establish. Young, unqualified labourers are continuously crossing the border and working in poor conditions, receiving little pay and saving employers the cost of South African labour, which in the years following the end of apartheid has escalated dramatically (IRIN, 2006b).

A key underlying perception of what constitutes a successful livelihood has also been informed by a century of labour migration, which has caused many to associate waged labour with social and economic success (Turner, 2001). Boehm (2000:20) concurs that the "perception from households is that regular income is the crucial indicator for livelihood security and well-being". With legal mass labour migration no longer an option, especially for men, households may turn to other means to secure a cash income, that is crucial when it comes to paying school fees, medical costs and feeding the family. With a stripped asset base, strained social networks, declining opportunities for income diversification and a reduction in expenditures difficult to achieve, many Basotho households are in a very difficult position (Boehm, 2004).

Chapter 4: Methodology

Researching extra-legal livelihood strategies raises particular ethical, political, moral and methodological concerns. Following discussion of these concerns, the multi-faceted research strategy that underpins this thesis is justified and detailed.

4.1 Researching extra-legal livelihoods: methodologies and ethics

Researching extra-legal livelihood strategies has the potential to raise many ethical, moral, political and methodological quandaries. This is particularly the case when a researcher envisages active engagement with the people involved in illegal or extra-legal activities and actually participating in the activities themselves. While there is a reasonable coverage in the literature about the research of sensitive topics (e.g., Lee, 1993), this term is so broad that it encompasses the whole spectrum of possible subjects and issues that could be classed as sensitive. Nearer one extreme end of that spectrum, which includes, for example, the production of and trading in illegal drugs, there is a dearth of both methodological frameworks and case studies. The studies that have been published tend to focus on urban contexts in MDCs (Ferrell & Hamm, 1998; Bourgois, 2003) and are therefore difficult to apply directly to research being conducted in rural areas of LDCs, although they do provide some useful insights.

These ethical, moral and political considerations intrude at every point in the research process, from the earliest decisions about sources of funding to end-of-project decisions regarding publication of the results. Furthermore, these considerations intrude at all levels – nationally, institutionally, in the community, and in the household (Manderson & Wilson, 1998). Added complications to this research project were the difficulties associated with being a white European male planning to do research in a rural area of southern Africa. Fortunately this issue has been given ample attention in the anthropological and development literatures (e.g., Devereux & Hoddinott, 1992; Campbell, 1995; Atkinson *et al*, 2001; Watts, 2001b; Flick *et al*, 2004; Pain, 2004).

The majority of research in the area of crime and deviance engages directly with those involved in or knowledgeable about extra-legal activities and invariably employs qualitative methodological tools. Qualitative methods can lessen the distinction between the formally educated researcher and the respondents. Whether through different interviewing techniques, participant-

observation or focus group discussions, the emphasis on creating a focused flow of conversation is more amenable to qualitative rather than quantitative data collection methods, such as surveys and questionnaires. Similarly, the importance of community and networks of acquaintanceships in rural areas makes qualitative methods particularly appealing for research in these settings (Weisheit, 1998).

As participant-observation was the principal method employed in the current research and since the issue of ethics has featured prominently in writings concerned with ethnographic methods, it is important to examine the ethical theories and issues that apply to this thesis in particular. Two sets of approaches, if implemented, enable ethnographic research to meet the demands of good ethical practice. Consequentialist approaches focus on the outcomes of research. In theory, an assessment is made of whether participants or their interests were harmed in any way and if they were harmed, the extent to which this damage was outweighed by any benefits that might accrue from the research. Deontological approaches, on the other hand, focus on the inherent rights of participants, such as their right to privacy, to respect or to self-determination. Ethical research should not only leave participants unharmed but should also avoid infringing their rights (Murphy & Dingwall, 2001). From these concerns ethicists were able to propose a set of principles to guide research practice. For example, Beauchamp *et al* (1982:18) arrived at the following typical list of four principles; the first two being essentially consequentialist while the latter two are mainly deontological:

> *Non-maleficence*: researchers should avoid harming participants
>
> *Beneficence*: research on human subjects should produce some positive and identifiable benefit rather than simply be carried out for its own sake

Autonomy or *self-determination*: values and decisions of research participants should be respected

Justice: that people who are equal in relevant respects should be treated equally

Decisions concerning ethics and methodology in ethnographic research are ultimately seeking to reach the "grail of informed consent" (Fine, 1993:274). Yet in many cases and particularly in projects concerning criminal and deviant activities, the balance between concealment and disclosure of the status of the researcher and the aims of the project is one that has to be continually addressed. The use of covert research methods has always been a contentious issue in social studies. Proponents have argued that covert methods offer researchers access to information that would be otherwise inaccessible (Calvey, 2000; Miller, 2001; Lauder, 2003; Lugosi, 2006), while critics have condemned covert methods as ethically and professionally unsound (Beauchamp *et al*, 1982; Bulmer, 1982; Warrick, 1982; Herrera, 1999).

Most experienced ethnographers acknowledge, however, that there is no clear divide between overt and covert research and that fieldwork relationships inevitably involve some covertness (e.g., Grills, 1998; Shaffir & Stebbins, 1991; Smith & Kornblum, 1996). Use of covert methods should be regarded as a last resort, where it would be impossible to use other methods to obtain essential information. Anonymity of research participants must be safeguarded in such studies and, if at all possible, informed consent should be obtained after the research has been carried out (Brewer, 2000). Fine (1993) discusses three different positions as an ethnographer: deep cover; explicit cover; and shallow cover. In the first, the researcher maintains silence on his/her status and the research. In the second, an opposite position, the researcher announces, as completely as possible, the goals and hypotheses of the research, without being concerned if this will affect the behaviour of participants. The final category seeks a middle ground where the research intent is disclosed but

goals are kept vague – so a position as researcher is established but the focus is not compromised.

Similarly Lee (1993) identifies three broad positions with regard to ethical stances. An absolutist position denounces all use of covert methods. The pragmatic or utilitarian position involves an evaluation of the costs to participants against potential benefits from the research, whilst the sceptical position says there is positive justification for covert research. One of the main arguments used in justifying a covert approach is that benefits will outweigh any potential harm to research subjects, but again there is usually no consensus among academics about such benefits. In practice, maintaining a covert position, particularly using a deep cover approach, may be difficult over the longer term, as more time is spent with participants. When researching deviant groups it may also become difficult to justify non-involvement or avoiding having to align oneself with one faction or another. Indeed Sluka (1990), who researched Irish Republican Army supporters in Belfast, cited being truthful about the purpose of the research as an important part of praxis in dangerous situations. Using a variety of techniques, such as knowing key figures in the community, avoiding contact with the authorities, identifying potentially dangerous situations and spaces, and having a flexible attitude to the research process, all help to allow researchers to interact with deviant groups (Sluka, 1990). Obviously, in the case of a setting where a translator is relied upon, then much of this responsibility lies on their shoulders and so excellent communication and a high level of trust between the researcher and his/her assistant are essential.

Issues concerning safety need to be extended, if necessary, beyond the ethnographer and the research assistants to include participants too (Lee, 1993). Similarly, participants can provide protection in dangerous settings, as well as assist in other roles, such as identifying and introducing potential participants or even becoming actively involved in interviewing as well as explaining informally understood norms to the ethnographer (Williams *et al*, 1992).

On a related note, the issue of an ethnographer's personal experience in the field and the personal emotions and moral dilemmas that they wrestle with are largely ignored in the final written product (Lecocq, 2002). Yet such issues have a direct impact on what one observes and records, and can carry through to the analysis and writing stages. The rigours of fieldwork are rarely understood in advance, but rather are regarded as part of the process that is learnt through a baptism of fire in the field (Robson & Willis, 1994). This is particularly the case for those trained outside the disciplines of anthropology and perhaps sociology (Cloke *et al*, 2004). Commenting specifically on ethnographies of crime and deviance, Ferrell and Hamm (1998:8) note that "engaged field research doesn't just risk existential disorientation, it all but guarantees it".

There are some unique dilemmas facing researchers working with those involved in criminal and deviant activities. In particular, if one is to be a participant-observer, one has to consider whether or not obeying the law will be possible. Indeed, obeying the law may present as much of a problem as breaking it (Ferrell, 1998), in terms of attempting to become an insider where the research is accepted by the participants. *Verstehen* was a concept originally developed by Weber (Allan, 2004) that denotes a process of subjective interpretation on the part of the social researcher. Through a sympathetic understanding between the researcher and the participants or subjects of study, the researcher comes to share, in part, the situated meanings and experiences of those under scrutiny. One danger with this process, if taken to its logical conclusion, is that the desire to understand the perspective of deviant groups and to work alongside the disadvantaged can lapse into a romanticised identification with the underdog (Gouldner, 1968). If a researcher does deem it crucial to the research that they may have to engage in criminal acts, this does not imply a suspension of a personal moral code, although obviously the distinctions become blurred at this point. This position has been referred to as the "accommodative morality" (Johnson, 1975, cited in Lee, 1993:140) of the fieldwork. It is also dependent on what types of law are being

broken no doubt, with the researcher's dilemma increasing in unison with the severity of the crime.

Another issue facing those researching criminal activities is the difficulty of being involved with both those who are committing the criminal acts and the authorities charged with the responsibility of enforcing the law. While such engagement with the authorities may not always be necessary, it is often desirable to understand the perspectives of both sides. Any sign of association with the authorities, however, could easily result in silence or worse when subsequently attempting to engage with deviant groups (Francis, 1992). Indeed, it is most likely that there will be little chance of being completely honest and open with both sides, at least simultaneously.

Making a good first impression when engaging with research subjects is vital for establishing trust and confidence at an early stage in the research. An important way of doing this is to have a sponsor who can introduce the researcher to the relevant gatekeepers. With regard to sensitive topics, sponsors may not always be who they seem and therefore caution is warranted when choosing whom to trust (Peritore, 1990; Lee, 1993). There is also a risk of informants erecting fronts, where through concealment, obfuscation or deception they deliberately attempt to halt a researcher's progress. Reciprocity and exchange are very important in the trust-building process and will generally help alleviate any fears that the subject of the research may have.

The process of collecting data on extra-legal activities can be very difficult, but there are a couple of points that may alleviate the situation. When discussing extra-legal activities with informants, the use of hypothetical responses by informants may allow them to distance themselves from otherwise bad or immoral practices (Christensen, 1992). Given that there may be little written literature on any extra-legal activities being researched, it is all the more important that some form of triangulation is set up to establish the accuracy of the information being collected. Key informants are very useful for this purpose. Other information can be gained from official data and statistics, although such data are notorious for underestimating the extent of extra-legal

activities (Lee, 1993), as well as perhaps relying on received wisdoms when analysing existing available data.

Conducting research on an extra-legal activity in an impoverished setting can also raise other issues than just the illegal nature of the subject. For example, researching during a food crisis is problematic, as apart from the moral dilemmas posed there is an incentive for respondents to understate their resources, especially in environments where food aid is distributed (Devereux & Hoddinott, 1992). It is vital that respondents' expectations are not raised as to any potential practical outcomes emanating from the research findings. In most cases, however, the purpose of education is widely recognised and respected, but it is important that this is stressed.

After leaving the field considerations about sensitive issues remain important. Maintaining the anonymity of informants and the study site will usually be important in studies involving illegal acts. Real names are really only ever useful in follow-up studies and there is little academic benefit and much to risk in providing them. This also needs to be considered during the fieldwork phase with regard to the recording of fieldnotes (Wilson, 1992; Hopf, 2004). Consideration also has to be given to the fact, however, that over-concealment can reduce the value of the research and risk the context being misunderstood. Ultimately ethnographic findings are not realities that are extracted from the field, but rather they are subjective truths that are continually negotiated in evolving relationships with research subjects (Cloke *et al*, 2004).

4.2 Methodology

A phenomenological perspective and an action-orientated stance guided the research that underpins this thesis. While an overt action-orientated stance was felt to be not permissible during the project, given the sensitivity of the topic, the research findings will be disseminated for the consideration of interested parties. The research is also influenced by a political economy approach and recognises that there is a play-off between structure and agency in which individuals make their own decisions but that these decisions are

framed within broader social, political and economic structures. Due to the very limited pre-existing information available on the research topic, both inductive and deductive research strategies were employed (Kitchin & Tate, 2000).

Multi-strategy research has been the methodological backbone of political ecology research and this project adopts a similar approach overall. Both qualitative and quantitative methodologies were utilised for the project, although the underlying approach is qualitative. Some authors have stated that such combinations of approaches defy epistemological and ontological commitments that the separate research methods have (Smith, 1983; Guba, 1985; Hughes, 1990). Viewed as technical aids, however, both quantitative and qualitative methodological tools can be used together, and a combination of such is particularly useful for the triangulation and verification of data (Bryman, 2004).

A broad array of secondary sources was consulted throughout the research process and these were found in a variety of institutions and collections. In Europe, the library of Trinity College, University of Dublin, the development studies library at University College Dublin and the collection held at the head office of Irish Aid were the principal collections accessed. Many journal articles were accessed online and interlibrary loans from the British Library allowed access to less common publications. In Lesotho, libraries at the National University of Lesotho (NUL), the Lesotho Highlands Development Authority (LHDA), the newly opened State library, the Ministry of Agriculture and Food Security and at the Bureau of Statistics were all consulted. In addition to these collections, archives at the *Public Eye*, Lesotho's English language weekly newspaper, were searched. Online archives for South African newspapers such as the *Mail & Guardian*, *The Independent Online*, and *SABC News* were also searched for issues related to the cross-border trafficking of cannabis. Much of the grey literature, particularly concerning agriculture and rural livelihoods, was obtained by visits to the offices of both local and international non-governmental organisations as well as private research consultancies based in Lesotho.

While there is an enormous quantity of literature available for both the theoretical frameworks drawn on for this project, as well as for Lesotho itself, the particular research focus on cannabis in Lesotho has a very sparse literary background, particularly relating to the historical context for production, trading and consumption. South African literature was important in this regard as it had a longer history and could be referred to for broader comparative issues.

As an extra-legal activity or indeed a livelihood strategy, information about the cultivation and trade of cannabis is almost entirely absent from government publications, except for official police statistics related to seizures of cannabis and drug-related arrests. While such police statistics for both Lesotho and South Africa were consulted, their value was limited because they also reflect policing capability, attitudes and motivations in addition to providing an assessment of cannabis production in an area. Access to the statistics was very restricted and involved correspondence with regional and national headquarters that entailed long delays. Police archives could not be consulted directly, but rather through an application process whereby specific information was requested for specific time periods.

Of crucial importance in research that is concerned with deviant activities is successful entry to those engaging in the activity and their environment. Successful entry is not merely a matter of achieving physical access to the study environment but also social access to the participants, where a degree of trust is established that information can be exchanged. Sponsors, gatekeepers and the criteria used for site selection are therefore very important for selecting appropriate study sites and gaining access to them. In November 2004, one year prior to the main period of fieldwork in Lesotho, a one-month preliminary fieldtrip was undertaken to Lesotho. During this time contacts were established, literature was gathered and visits to some potential study areas were conducted. An emphasis was also placed on establishing relations with the Department of Geography at NUL. This alliance with the University during the fieldwork periods proved invaluable from both an administrative perspective,

particularly with regard to obtaining a resident's permit and research permission, as well as for academic support.

Potential study locations were identified through an examination of the literary sources that referred to cannabis production in Lesotho and discussions with contacts in Lesotho. The importance of sponsors and gatekeepers in helping to gain access to communities who were involved in cannabis production was clearly evident from the outset. In December 2005 an area near Ha Sekake in the mountainous southeastern district of Qacha's Nek (see Fig. 4.1) was selected as an initial study site. Although there was evidence of cannabis trafficking in the area, the focus of production was the remote Qabane valley, about five hours walk from where I was based. While there was a good research source to compare changes in livelihood indicators over time in the area (see Hall & Adams, 1991), there were logistical constraints in operating in such an isolated area. More importantly, the sponsor at this site was an expatriate church leader and, although extremely helpful, his connections were primarily with his parishioners, and as a consequence my association with this man were not leading to connections being easily established with those involved in the cannabis trade. Also of note, with regard to the earlier discussion on research praxis, a covert position to research was adopted at this first site. Evasive answers avoided queries that asked about the purpose of the research except when talking to the sponsor or potential translators. After four weeks, however, an assessment of the situation was made and a second site, the village of Botsoapa[16] in Berea district in the northwest of Lesotho, was visited and finally selected as the main location for the field-based component of the research.

Berea district is in the agro-ecological region known as the foothills, where the highlands and western lowlands meet. The area is anecdotally renowned throughout Lesotho for growing cannabis. A senior researcher at NUL had heard of the research project and had offered to act as a sponsor and

[16] This is a pseudonym.

to introduce me to Berea district, as one area where cannabis cultivation was common, and in particular to her ancestral home village of Botsoapa.

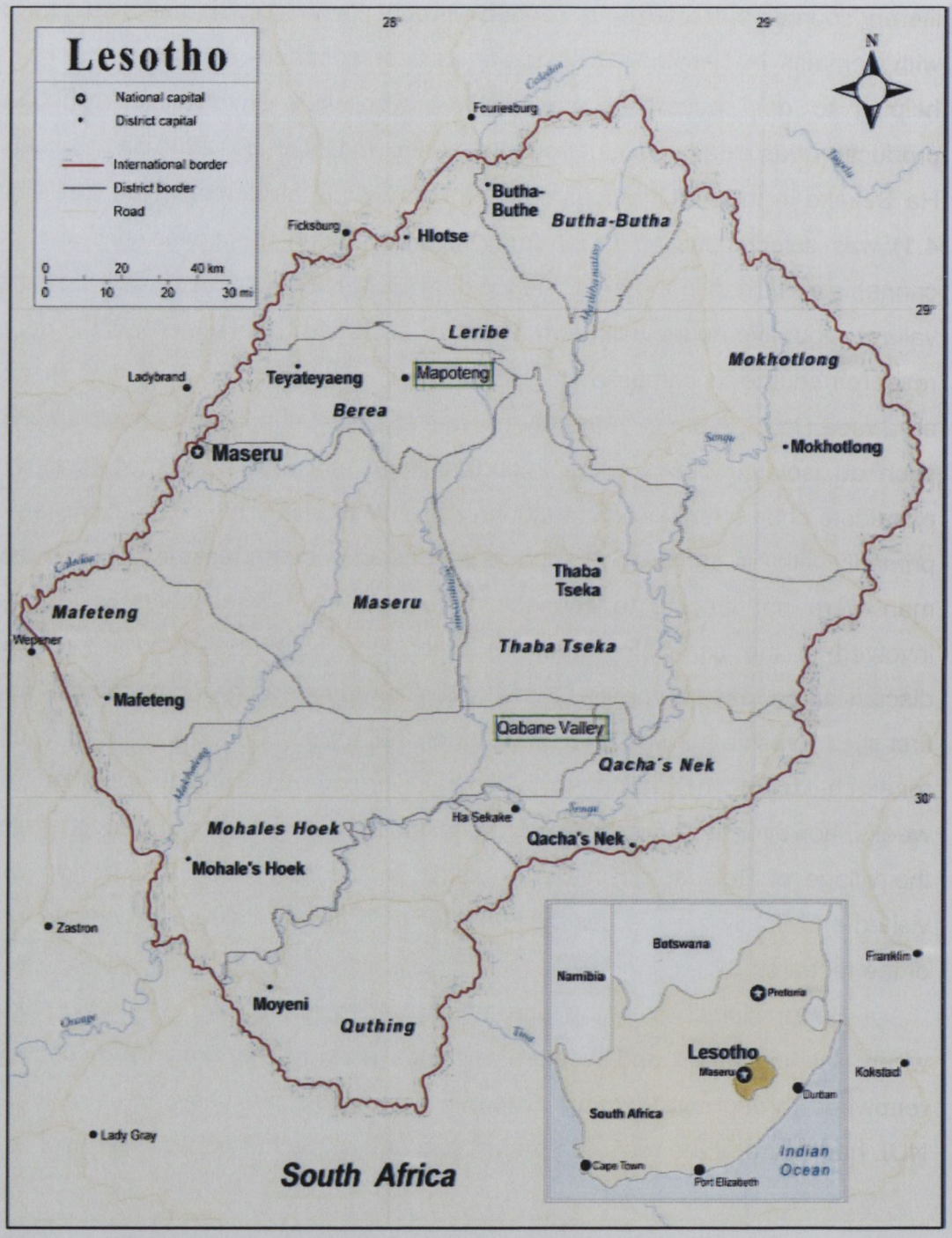


Fig. 4.1 Political map of Lesotho, showing highlighted study areas

An initial visit to the area with the sponsor proved that she was clearly well respected by those whom we met. Following the failure of a more rigidly covert approach in the first site, a more frank and open position was established from the outset at the second site. Although some people were initially reluctant to consider the idea of a project focusing on cannabis, most members of the village community consulted in the initial meetings appeared open to my presence. It was hugely beneficial that the sponsor's extended family were the leaders in the community. Accommodation was arranged in one of the *rondavels* in the compound of the *ramotsi*[17]. This was symbolically important as a sign of acceptance, but it also proved a highly convenient location. As the headman's compound is the centre of all political and administrative activity in the village, I was frequently involved in discussions about a range of issues, including cannabis, with a wide selection of members of the local community.

A third site in the highlands of the Maluti mountains, on the border with South Africa's KwaZulu Natal province in eastern Lesotho, was also used later in the research in an attempt to gain a comparative understanding of the cannabis trade. Again a sponsor, this time a former manager of an agricultural NGO, introduced me to a gatekeeper who was the chairperson of a local cooperative of organic farmers. Several visits were made to this site, lasting several days in total. Rather than being a location of intense cannabis production itself, the site was instead on a trafficking route that smugglers used to bring cannabis to the mountain passes that led across the border to South Africa. Nonetheless some useful information on the trade in the highlands region was obtained.

The main period of research in Botsoapa involved the use of participant-observation over a 12-month period, from January 2006 until December 2006. The other methodological techniques used were also implemented during this period. There are several important issues to consider with regard to using participant-observation in this context.

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[17] Village headman.

The issue of language is obviously important in a setting where a researcher does not speak the main contact language. Although English is spoken widely in Lesotho, particularly amongst those who have received a secondary school education or who have worked and lived in South Africa, Sesotho is the *lingua franca*, especially in rural areas. While ethnographic research in the past would have placed a lot of emphasis on the importance of learning the language, more recently authors have questioned the necessity of this (Devereux, 1992; Watson, 2004). While not denying the value to be gained from being knowledgeable in the local language, there is a need to balance this with the time spent attaining the required level of fluency within the overall time available for the project. Given that English is the second language in Lesotho and that the majority of key informant interviews could be carried out in English, it was decided that the project could be carried out with the chief investigator only having a low level proficiency in Sesotho but in receipt of assistance from a research assistant with fluency in both English and Sesotho.

The selection of a suitable research assistant had major implications for the success of a research project, such as this, where an assistant will have a pivotal role to fulfil. Translation was only one aspect of an assistant's responsibilities. Another vital function included maintaining and expanding a web of informants at the village level and beyond. As the person who would be in direct contact with the majority of informants in the village, it was essential that the assistant portrayed trustworthiness and honesty. A relaxed manner also had to be maintained in order to interact with informants involved in extra-legal activities and to remain calm and levelheaded in sometimes-tense interactions. The assistant was either going to be a recent university graduate of a relevant social studies discipline or a high school graduate living in the vicinity of the study area. The advantage of the former would be a good grounding in theoretical aspects of the research, as well as excellent language skills. Employing a university graduate would, however, have been relatively costly, while recruiting a locally based assistant would also benefit the project by facilitating establishment of a local network of informants. It would also be

more practical for an assistant to live and work near to their home area for the duration of the project. In the end a decision was made to recruit a locally based male in his mid-20s who had completed high school and spoke English very well but, like so many young men in Lesotho, was unemployed. Given the living arrangements of sharing accommodation it was more acceptable for the assistant to be male, although the potential benefits of hiring a female assistant for a better understanding of women's perspective was recognised.

Methodological framework

Figure 4.2 provides an outline of the methodological framework for the research project once the identification of appropriate research questions had been decided upon. The following section will present the field-based methods that were used to gather data and the subsequent analytical approaches that were employed in the data analysis.

During the participant-observation process farmers were followed and helped in their daily tasks, and households in Botsoapa and surrounding villages were visited. Potential interviewees were identified. Older informants were a particular focus, as they had both more time for discussion and they could provide a better historical perspective on how issues such as agriculture and livelihoods had changed over time in Botsoapa. Because of this, a life history approach was frequently used (Francis, 1992). In these situations, an understanding of the macro-developments is important in order to understand issues that are referred to by the respondents (Francis, 1992). It is also important to recognise that people may fail to disclose or even to recollect information on subjects that they find uncomfortable, as well as realising that the act of telling the story of a life to a researcher is riddled with ethical issues of confidentiality, deception, honesty, consent, exploitation and betrayal, with potentially damaging consequences for both informants and the researcher (Plummer, 2001).

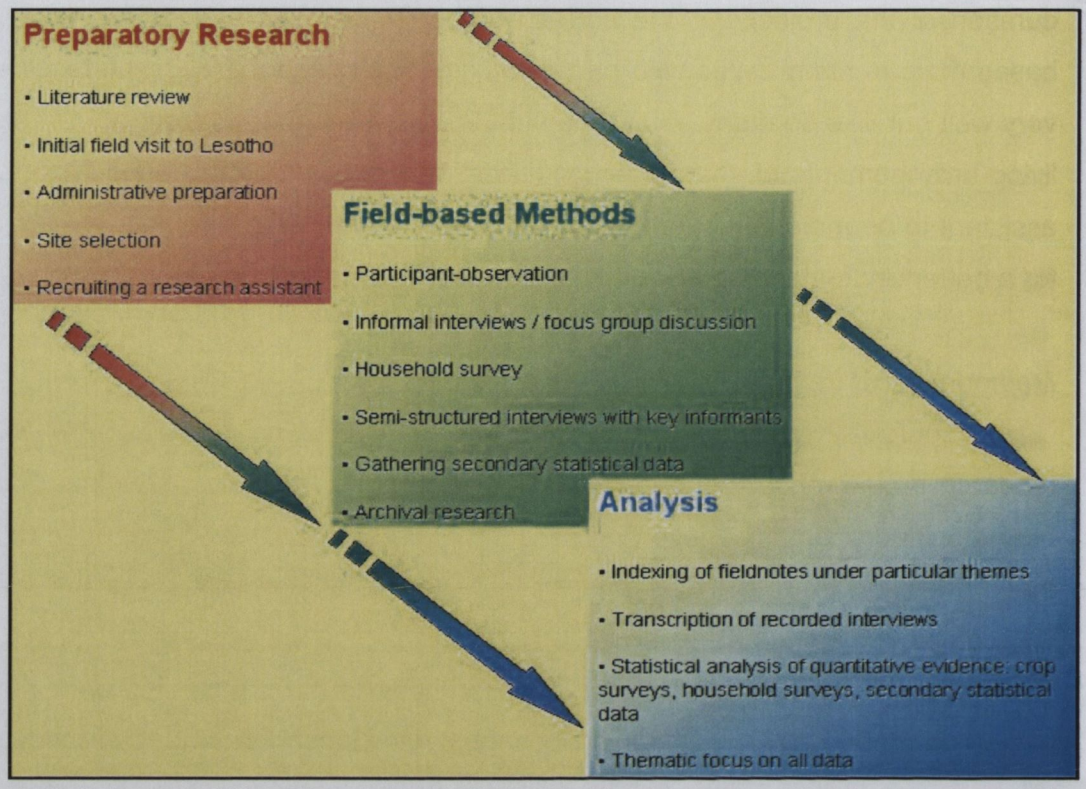


Fig. 4.2 Outline of the methodological framework adopted in the current research

The interviewing techniques employed during the research covered a broad spectrum of methods, including an interview guide approach, structured open-ended interviews and focus group interviews. An interview guide approach was used primarily during interaction with farmers and other people encountered during the fieldwork in Botsoapa itself. The approach is characterised as maintaining a conversational style but with guiding questions keeping the interview focused on the concerns of the interviewer (Kitchin & Tate, 2000). Structured open-ended interviews were generally reserved for interviews with key informants to the research project. Examples of such informants include police officers, magistrates, local chiefs and teachers. These were people who could provide a particular perspective, from their position as key figures in the community, on aspects of the research project. The interviewer maintains control during structured open-ended interviews by using a structured set of questions, but the interviewee is allowed freedom to

give whatever answers they deem appropriate (Bryman, 2004). Finally, group interviews involve the selection of participants who are then guided by a moderator rather than interviewed. This approach is particularly useful for discussing a particular topic that relates to the group with dynamics of a group interview often bringing out experiences that are not as well articulated in a one-on-one interview setting. During the research project, group interviews were held with community leaders including the village chief and members of various committees that were responsible for issues such as rangeland management. The group interviews focused on general issues relating to farming, notably the construction of the seasonal calendar of farm activities, as well as the market price for primary commodities, such as maize meal, throughout the year. In these groups, a blank calendar was presented on a large piece of paper with a member of the group nominated to write in the findings from the group discussion. Such methods have been developed under the heading of participatory rural appraisal (e.g., Chambers, 1994a; 1994b; 1994c).

Much of the information relating to cannabis cultivation itself was gathered whilst participating with the community in their daily activities - working in the fields, planting, weeding or harvesting. As trust was established with particular farmers, more time would be spent working with them and developing deeper relationships. Most people were more relaxed in settings where they were engaged in an activity than in a face-to-face style interview, as well as the obvious benefits of having shared the experience of what farming in Botsoapa entailed. Similarly, as the owner of the only vehicle in the village, many conversations took place as I gave lifts to people who needed to visit the hospital, to collect their old age pensions or were visiting the capital, Maseru.

A final word on participant-observation at this point concerns the recording of information. The majority of information was recorded as fieldnotes, but it is worth considering the use of other recording media, such as visual and audio forms. The style of writing of fieldnotes often depends on the environment where participant-observation is occurring. For example, in deep cover covert research it would not usually be appropriate to be seen writing

copious notes. Instead moments away from the group may be used to jot down notes that will be expanded on as soon as possible (Lyng, 1998). In this project notes could often be written as interviews took place, although consent by the interviewees was always asked. In some situations, however, when an illegal act surrounding cannabis was taking place, notes would often be written up retrospectively. No matter how soon after events have been observed or with what accuracy they are recorded, fieldnotes are a form of representation and, as such, are inevitably selective (Emerson *et al*, 2001).

The use of voice recorders for recording conversations during the participant-observation phase was not practiced, because of the possibility that such recordings would alienate potential interviewees. There were also logistical considerations, in that the volume of recordings made over the fieldwork component of the research, requiring transcription and translation, would quickly have become unmanageable. Voice recordings were made during several of the key informant interviews and these were subsequently transcribed. Photography, on the other hand, was utilised frequently, to capture and record visual images of daily life in Botsoapa and requests to take photographs were rarely declined. In fact, having a camera often elicited invitations to stop and talk with people who were eager to have their photograph taken, so photography sometimes played an important role in assisting with access. Photography can, in fact, be used as an alternative way of giving something back to the community, and research subjects can also be consulted and direct what information they would like recorded (Pink, 2007).

In order to establish the importance of cannabis in relation to other crops grown in Botsoapa, a field survey was carried out. The survey involved firstly the sketching of maps showing all the fields in the village and then recording the crops planted in each field. In order to allay farmers' fears and for greater ease, the measuring of field areas was left until the winter months when the crops had been harvested and fields were easier to access. Many fields were rectangular shaped, but dividing the field into triangles and squares with string and then recording their areas and adding them together provided a means of calculating

the size of irregular field areas. Approximate yields for cannabis were also calculated by measuring the density of cannabis plants over one square metre and then by weighing dried plant samples on a digital scales at NUL. Technical advice was obtained from a researcher who was working for the UNODC (Leggett, 2006b).

A detailed household survey was carried out in order to gather baseline demographic and livelihood data on households in the village, as well as to analyse income and expenditure patterns[18]. All 33 households in the study village were surveyed during the winter months, when the workload was less, in order to incur minimum disruption to households. Two survey models in particular were consulted when preparing the survey, namely Save the Children's Household Economy Approach (Seaman *et al*, 2000) and the Lesotho Vulnerability and Capacity assessment model (LVAC, 2005). Both of these surveys focused on identifying key livelihood indictors and establishing a household's income and expenditure. The questionnaire designed for the survey in Botsoapa included questions relating to a household's size and employment status. Income and expenditure data were collected from a broad range of questions, including information on livestock and field ownership, cash income from a variety of sources and a detailed listing of the key expenditures. Given the limited sample size (33 households), the findings should not be viewed as statistically significant or applicable to a different setting. They are helpful nevertheless in providing baseline data and to support qualitative data, and statistical tests were carried out on the data obtained during its analysis. Of relevance here is the point that income, particularly from wages, is a fleeting asset in Lesotho. Therefore economic wealth at one particular point in time does not necessarily mean long-term economic security (Ferguson, 1992). Similarly, the number of fields a household has ownership of or access to typically says little about their economic well-being, although in an area dependent on a cash crop economy rather than a subsistence farming

[18] See Appendix I for the questionnaire that was designed and used during the household survey.

economy, this may possibly not be the case. In Lesotho, land is often concentrated in the older generations who have acquired access to land through marriage and the establishment of a homestead. Yet these households may also lack the financial capital to invest in the land and to purchase the inputs required for farming. Consequently, in the past at any rate, many of these older households relied on share cropping with younger households who lack the land but have access to resources to farm the land (Turner, 2005). This may not be the case in an area that is dependent on cash crop production because an income is being generated directly from the land. Therefore a farmer who is dependent on cash crops would, presumably, be better off if he owned more fields.

Approximately twenty-five key informants outside of the study area were also interviewed, including chiefs, politicians, local councillors, senior police officers (from both Lesotho and South Africa), a district magistrate, a secondary school principal and a historian. As well as these figures of authority, several of the key informants were smugglers in the cannabis trade themselves. These people were selected on the basis of having either a direct knowledge of issues relating to the cannabis trade or as result of their work involving them in such. For example, the school principal was interviewed in order to establish if she saw a correlation between the cannabis trade and the ability to pay school fees in Botsoapa and villages surrounding the school. Generally these informants or their organisations were either approached directly or with an introduction by NUL or, in one case, by the Irish embassy in Maseru. Such introductions greatly facilitated the research. One limitation that should be noted here relates to the difficulty of interviewing both police and politicians on the issue of cannabis. Official interviews with either group tended to, unsurprisingly, only reveal the official position of both groups, rather than the reality that was evident from contacts I had had with police in the study area. Ironically therefore it was, in fact, more difficult to obtain a perspective from key informants among the police and politicians than from those involved directly in

the extra-legal trade – something that had not been anticipated prior to the fieldwork but in hindsight is easier to understand.

A final tool that was used to estimate the historical creation and expansion of fields was the use of aerial photography and satellite images. There is an aerial photograph archive for the entire country that was collected in the late 1970s and early 1980s. At the time of writing, the country is being digitally photographed again, but unfortunately the images will not be available until after the submission of the thesis. An aerial photograph of the area, taken in 1980, was compared instead with a recently acquired composite satellite image available online in order to provide an indication of land cover changes in the study area over the past two to three decades.

As previously mentioned, one of the principal benefits of a multi-research strategy approach is the ability to triangulate data gathered from a variety of sources in various different ways. Fieldnotes were analysed by creating a thematic index and were written up following a thematic narrative approach (Emerson *et al*, 2001). A similar method was used to analyse transcribed interviews. Estimating price ranges and profits in the cannabis commodity chain is one example of how the multi-research strategy approach was used to triangulate data gathered from different sources during the analysis of data. Data was obtained from interviews with farmers, smugglers and police, as well as official police statistics and media reports, were used to estimate price ranges and potential profit margins at different points along the cannabis commodity chain. However, there were many unknown variables in the commodity chain, such as the payment of bribes, that make it difficult to accurately estimate profit margins, particularly in South Africa where almost no qualitative research was conducted.

The household surveys and police statistics were inputted to and analysed by two statistical spreadsheet programmes, Microsoft Excel and SPSS. For the police statistics concerning cannabis seizures and charge records, results were simply presented in tabular form. For the household survey, results were analysed by investigating incidences of statistically

significant correlations between variables. Descriptive statistics analysing basis statistical concepts, such as mean, cumulative frequency and range, were also carried out.

Chapter 5: Introduction to the study area

This chapter begins with an introduction to the climatic and geographic characteristics of the Northern Foothills agro-ecological region where Botsoapa is located. Following this there is an introduction to Botsoapa itself that draws on findings from the research to present an overview of the village with specific attention to demographic and livelihood characteristics.

5.1 Physical characteristics of the Northern Foothills

The village of Botsoapa overlooks the western lowlands of Lesotho, with the highveld of South Africa's eastern Free State province visible on the horizon (Plate 5.1). At an altitude of 1985 mamsl, the village is situated in what is usually identified as the northern section of the Foothills agro-ecological zone in Lesotho (Fig. 5.1). This zone marks the boundary between the lowlands in the west of the country and the high mountains in the centre and east.



Plate 5.1 View of Botsoapa

While average annual rainfall in Lesotho is 780 mm, the northern foothills region normally receive slightly higher amounts, up to approximately 1000 mm (Ranthamane, 2004). Temperatures in the foothills range between -8° and 30°C, due to a marked seasonality between the cold winters and warmer summer months.

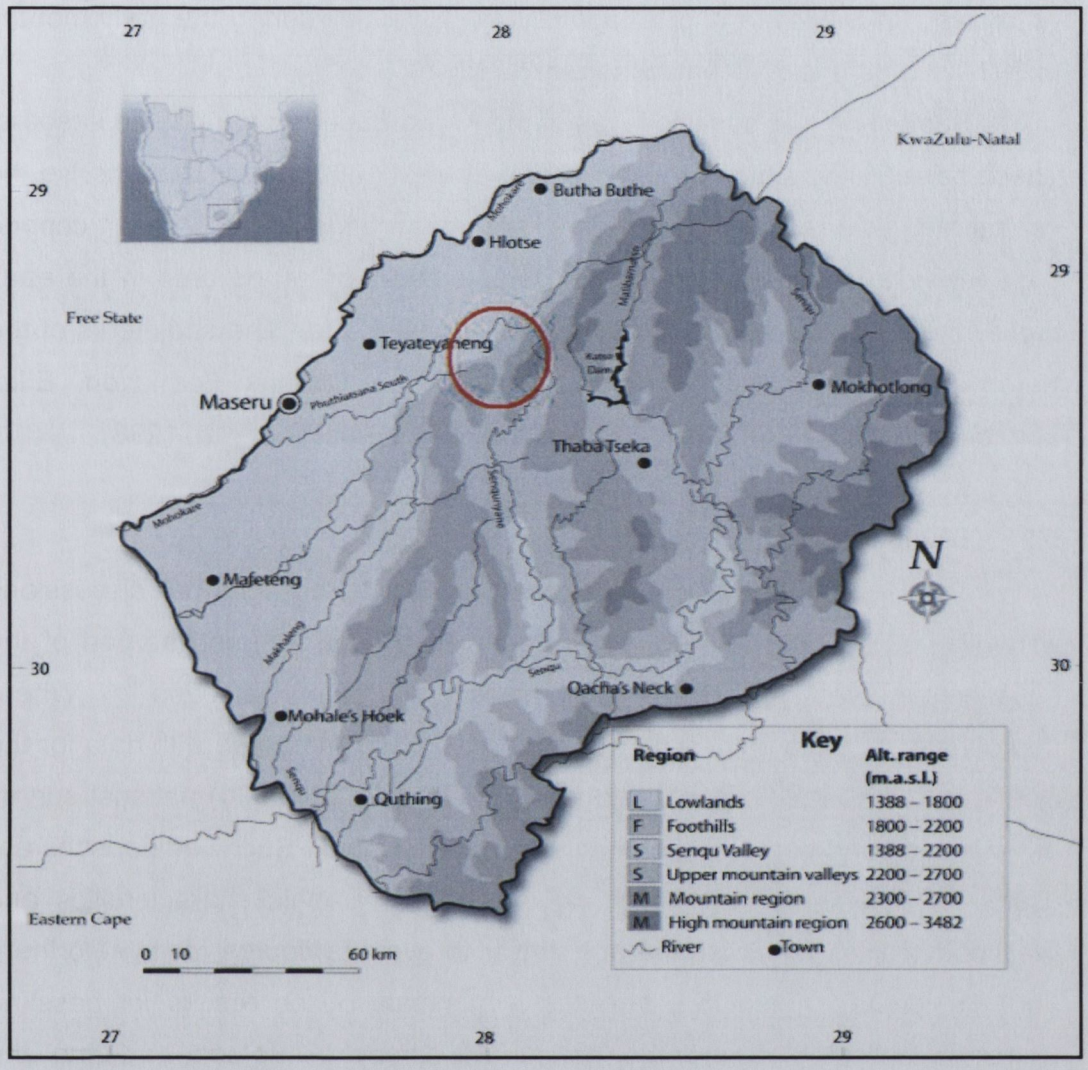


Fig. 5.1 Topographical map of Lesotho showing main agro-ecological zones with general area of Botsoapa highlighted (adapted from Kobisi, 2005).

Winter frosts are a particularly important consideration for farmers in Lesotho, especially given the sensitivity to low temperatures of the staple crop, maize. Marked seasonality is also evident in rainfall patterns, with 85% of the total rainfall occurring between October and April (Ranthamane, 2004). Along with the rest of the southern African region, Lesotho has experienced dramatic climate variability in recent years. After several years of prevailing drought conditions, during the fieldwork in 2006 Lesotho recorded the heaviest rainfall in two decades (IRIN, 2006). At the time of writing (June 2007), however, severe

drought conditions have returned once more, with the second driest conditions on record. In Botsoapa and the foothills zone, rainfall during the early months of 2007 was 60% to 75% below normal (LMS, 2007).

Sediments and basaltic lavas of the Karoo Supergroup underlie Lesotho. These basaltic lavas attain a thickness of at least 1600 m and characterise the central mountain region that Botsoapa sits on the edge of. The basalt capped the underlying sediments during the tectonic evolution of the area in the early part of the Jurassic Period, some 190 million years ago. The sediments of the Karoo Supergroup in this region comprise the Clarens Formation, Elliot Formation, Molteno Formation and Beaufort Group (Marake *et al*, 1998).

5.2 Botsoapa: an introduction

This section draws on information gathered from informal discussions with villagers in Botsoapa, as well as population data gathered as part of the household survey, to provide an overview of life in Botsoapa[19]. Where appropriate, the data gathered during the project are compared with data for the Northern Foothills region obtained from Hall and Gay's (2000) national survey of livelihoods and population characteristics in Lesotho. Such comparisons are useful for determining the extent to which demographic characteristics and livelihood profiles for Botsoapa are similar to average figures for the Northern Foothills region. Figure 5.2 provides a summary of the results for baseline indicators collected during the household survey in Botsoapa during the fieldwork.

Botsoapa was founded at the end of the nineteenth century A.D. by the grandparents of the village headman. The family apparently possessed many cattle as well as other livestock, including goats, sheep and horses, and they had travelled from Mohale's Hoek, in southeastern Lesotho, in search of pasture. That the Basotho were a pastoral people then is emphasised by the fact that elderly people recollected how there were no fields around the village

[19] The original population data collected as part of the household survey can be viewed in Appendix II. The original format of the household survey can be seen in Appendix I.

in the early decades of the twentieth century, rather the land was used almost exclusively for grazing. Only a couple of households were living on the site of the village initially.

Total number of households:	**33**
Total population:	**176**
Average size of household:	**5.33 persons per household**
Land access:	**94% of households had access to at least one field were engaged in agriculture**
Livestock:	**12% of households had no livestock**
Income:	**21% of households had a regular wage earner (of these 1 in 3 earners worked in South Africa)**
	15% of households had at least one member receiving the state old age pension
Education:	**86% of adults have received at least one year of formal education**

Fig. 5.2 Summary of baseline indicators from Botsoapa household survey

The eldest villager, the headman's father and former headman himself, Ntate Khotso[20], was born in Botsoapa in 1915 and his recollection of his early years provide an interesting perspective, both of life in Botsoapa as well as the wider political and economic developments at the time. Ntate Khotso recalled how as a young boy he was responsible for herding the cattle. There were still many wild animals in the area, especially bok and eland, and hunting was an important source of food as well as other products, such as hides for clothing. Housing at this time was constructed from grass rather than stone. Ntate

[20] *Ntate* meaning father, and *M'e*, meaning mother, are ubiquitous pre-fixes for addressing people in Sesotho. For children or friends the terms *abuti* (brother) and *aussi* (sister) may be used.

Khotso married his wife M'e Matanki in the mid-1930s and then in 1936, at 21 years of age, Ntate Khotso went to work in the mines in South Africa. Travelling by train from Ficksburg, he went to work in the coalmines in Springs, near Johannesburg. Conditions in the shaft mines were very harsh and dangerous. Working in underwear as a result of the heat, underground workers carried a battery on their waist to power a head torch. If spilled the battery acid caused severe burns. Rats and swallows were also brought into the mines with the knowledge that if these animals ran or flew out of the tunnels then the workers knew something was wrong, such as a tunnel was at the point of collapse, and they had to get out. Ntate Khotso's left hand was crippled after an accident in the mines in 1938 and he was sent home, with no mention of compensation. This story is important for a number of reasons. First, it highlights the development of the migrant labour system and demonstrates that even as far back as the 1930s, wage labour was a vital concern for villages, such as Botsoapa, in colonial Basutoland. Second, it shows how the process of seeking wage labour was intimately tied up with the process of establishing a household, as Ntate Khotso left for South Africa shortly after getting married. Third, it demonstrates the hardships that were encountered as a migrant labourer in South Africa, especially in the mines. Workers and their families not only had to deal with the serious physical hardships, but also the social disruption caused by the very long periods spent apart.

In the years since Ntate Khotso ventured to the mines, Botsoapa has slowly expanded to 33 households, according to the household survey, and a current population of 176 people. The formal migrant labour system that employed many of Botsoapa's men during the 20th century has been in decline since the late 1980s. Opportunities for wage employment have instead been substituted to some degree by domestic industrial development, such as the textile factories in Maseru and other border towns that mainly employ women, including some originally from Botsoapa. Young men have less possibility of formal employment. South Africa and particularly its construction industry is still the destination for many young men, although without work permits many end

up working illegally. One or two have been more successful and have managed to get educated and find work in the formal sector. One man works in Europe as a laboratory technician following his training in South Africa and work on the LHWP. His wife and children remain in the village and he returns, as many migrant labourers have done in the past, only rarely during the year.

For those staying in the village, subsistence farming represents one of the primary livelihood strategies for households, with 94% of households engaged in agriculture. Yet subsistence agriculture on its own is hardly viable. Income is still required, for example, for many basic expenses, such as education fees, transport costs, clothing and health, as well as basic foodstuffs and, in order to achieve agricultural production in the first place, artificial fertiliser and farm implements. As will become evident in the following chapter, however, over at least the preceding three decades the production and trade of cannabis has provided an income for every household in the village.

Botsoapa is approximately 5 km from Ha Mantsi and this is the nearest point at which to board a minibus taxi. From Ha Mantsi the road to Botsoapa gradually deteriorates, with the last 3 km only accessibly to four-wheel drive vehicles. During the rain the dirt road becomes impassable with no traction in the mud (Plate 5.2). People travel by foot and use either donkeys or oxen and cart for heavy loads or for those who cannot walk. At the end of the fieldwork period of the current research mains electricity supply had been extended to Ha Mantsi, but such services do not reach the surrounding valleys.

Botsoapa's drinking water comes as runoff from the mountainside and is stored in two concrete tanks that were built by the Department of Rural Water Supply in the mid-1990s. From these tanks water flows to a number of communal taps in the village. Water rationing, in which the supply to each household is closed off apart from in the early morning and early evening, is common during the dry months. Although several new pit latrines had been constructed in the past couple of years (again by the Government), many

households still do not have access to latrines, leading to health risks with contaminated drinking water.[21]



Plate 5.2 Access by vehicle to Botsoapa is restricted in times of rain.

Several households have mobile phones and, in contrast to many of the surrounding villages, most of Botsoapa receives a network signal as the village overlooks the populated lowlands. While most of those who own phones in the village rarely appeared to have phone credit to make a phone call or send a text message, the phones are very useful for receiving messages. Phone owners often receive messages for other families in the village, particularly in the event of a death of somebody. Electrical goods such as mobile phones and radios are charged using a car battery. In the past such batteries had to be carried to

[21] The author contracted typhoid shortly after moving into the village and other people in the village also complained of illness at this time.

a place with mains electricity in order to be recharged, but small portable solar panels now enable people to charge the batteries at home.

There are two health clinics in the area, both approximately 6 km from the village. These clinics, however, only have one community health nurse each and so for any illness that requires more specialised attention a journey to the hospital, 25 km distant, is necessary. For those who are unable to walk such a distance, such as some of the elderly or the seriously ill, the journey involves being brought by oxen and cart to the sealed road at Ha Mantsi, where they can board a minibus taxi that passes the hospital. A basic fee of M20 is charged at the hospital. This charge is often beyond the poorest members of the community and unless seriously ill they may not attend the hospital. In some cases, alternative treatments will often be sought.

The police station for the area is also located near the hospital in Mapoteng. Police patrols are usually made on horseback or by foot, as there is only one police vehicle for the station. Reinforcements of both police and vehicles can be brought in from the district headquarters at Teyateyaneng when needed, particularly during planned operations.

Children attending primary school have a choice of two schools that are both approximately 3 km from the village. A new secondary school, about 4 km from Botsoapa, opened in 2004. Previously children had to travel at least 8 km to the nearest secondary school. Two thirds of households in the village send children to either the primary or secondary schools. Unsurprisingly, older generations in the village are less likely to have received a formal education. No head of any household or indeed their spouses attended school beyond primary level, and one quarter of the household heads never received any formal education. Out of the total 33 households surveyed in the village, 86% of the adult population (100 people) had received at least one year of formal education while 14% had never attended school. This corresponds identically with earlier findings for the Northern Foothills region made by Hall and Gay (2000) in their nationwide poverty and livelihood survey.

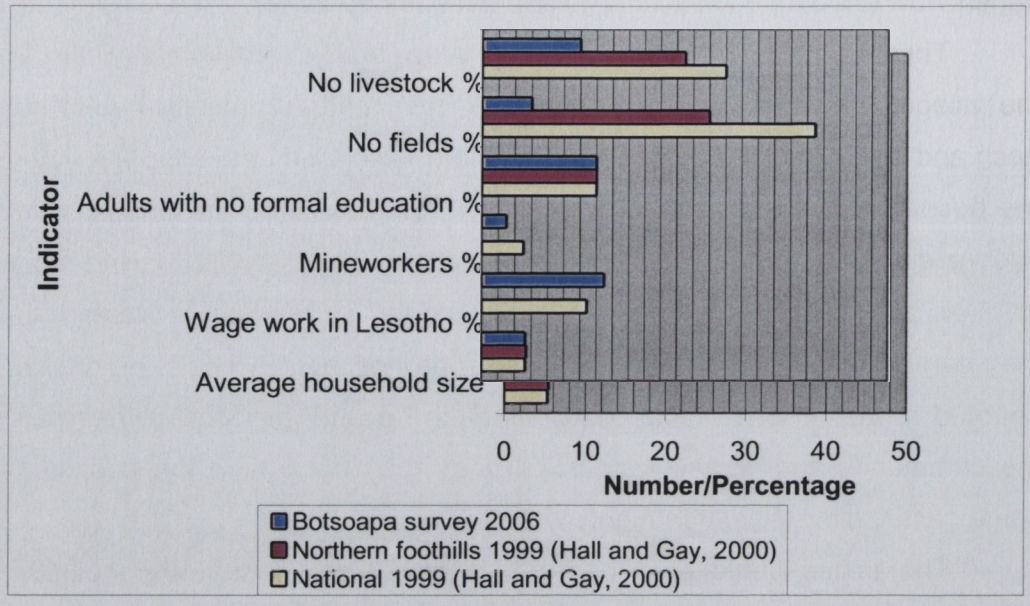


Fig. 5.3 Comparing Botsoapa, the Northern Foothills and national figures: baseline indicators

The average household size in Botsoapa is 5.33 persons per household, which corresponds quite closely with Hall and Gay's (2000:71) finding of 5.42 for the northern foothills region and is identical to their national average (see Fig. 5.3). In contrast, Hall and Gay (2000) found urban household sizes to be 4.37 and mountain regions to be 5.78. Similarly their employment statistics make for some interesting comparisons. In Botsoapa, 21% of households were found to have a formal wage earner. Two thirds of employed household members (15% of the total adult population) worked in Lesotho and the rest in South Africa and abroad. This figure of 15% is slightly higher than the national figure of 12.8%, as found by Hall and Gay (2000:71), but this national figure would also, of course, include the mountains where less wage employment is available. One man from Botsoapa was a mineworker in South Africa, therefore 1% of the total adult population in Botsoapa was employed in the mines. This is considerably lower than the 5.1% national average found by Hall and Gay (2000) seven years previously, especially as the Northern Foothills and Northern Lowlands regions were traditionally the main recruiting areas for

mineworkers because of their proximity to South Africa's industrial and mining centres.

The most significant difference in the baseline indicators for those collected during the household survey in Botsoapa and those collected by Hall and Gay (2000) is with regard to percentages of households that have either no fields or no livestock. Those who have access to fields or livestock through sharing mechanisms such as *seahlolo* (sharecropping) or *mafisa* (sharing mechanism for livestock) were not regarded as having their own fields or livestock. Measures of land and livestock, of course, represent crucial assets in a subsistence farming economy. Landlessness has traditionally been recognised as an issue of vital bearing on levels of poverty in rural Lesotho and Hall and Gay (2000) found that 41% of all households in Lesotho had no fields. In the Northern Foothills this figure dropped to 28% of households. However, in Botsoapa, only 6% of households did not have fields. Therefore there would appear to be very low levels of landlessness in comparison to the findings made previously by Hall and Gay (2000).

Similarly, the percentage of households without any livestock was also much lower in Botsoapa than earlier findings for the Northern Foothills region (Hall and Gay, 2000), although not quite as dramatic as the differences in access to fields. Hall and Gay (2000) found that 30% of all households in Lesotho had no livestock. In the northern foothills this figure was 25%. Yet in Botsoapa only 12% of households surveyed had no livestock. While the other baseline indicators examined above seem to correlate closely with the earlier findings, these two important agricultural baseline indicators highlight important differences between Botsoapa and the more general statistics presented by Hall and Gay (2000). The 33 households interviewed in Botsoapa cannot be regarded as statistically significant, but nonetheless this divergence is worth noting and bearing in mind, particularly in a context where a cash crop economy is functioning.

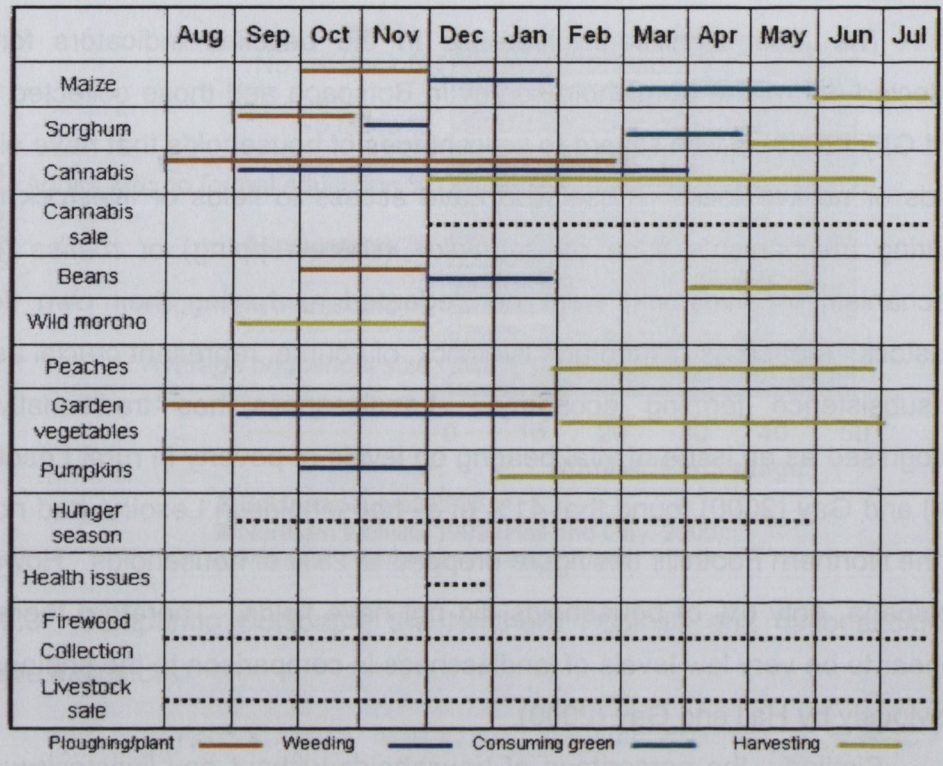


Fig. 5.4 Seasonal calendar for Botsoapa

The agricultural season begins in earnest between late August and early September when the fields are ploughed and planted with seeds. The land will have been prepared over the winter months: cattle eat any crop residues in the fields, such as stalks of maize, encroaching scrub is cleared back and burnt, and the fields are ploughed. Ploughing and planting are carried out using teams of oxen and two people, usually restricted to men, working with the team. Those who do not have their own cattle can hire others to do the ploughing and planting or else enter into a sharecropping arrangement. Sorghum is usually the first food crop to be planted (in September), along with *mokopo* (pumpkins) and *moroho* (leafy vegetables) in the vegetable plots (see Fig. 5.4). Depending on the rainfall, maize and beans will be planted from October onwards, but farmers will wait to try and ensure there is enough moisture in the soil, as crops can be lost if planted before sufficient rain falls in the growing season.

Conversely, if crops are planted too late in the season they will not reach full maturity by harvest time. Both maize and sorghum, the two dominant food crops in Botsoapa at the time of the crop survey, require weeding during their lifecycle. This is ideally carried out a couple of months after planting, beginning with sorghum in November followed by maize in December and January. Although weeding was traditionally regarded as the responsibility of women in the past in Lesotho, the division of labour along gender lines appeared to be less marked in Botsoapa in 2006 – no doubt in part because of the reappearance of men in the village following the decline of migrant labour opportunities.

Besides the vegetables planted, wild vegetables are also available and collected from September until November. These leafy vegetables are dried, shredded and stored for use during the winter months when no cultivated vegetables are available. Peaches are the sole soft fruit that is widely available across Lesotho and they are ripe for consumption between February and June.

For those households who have exhausted their stocks of maize and sorghum, some having done so as early as September, the eating of green, immature crops is the only recourse. Both maize and sorghum are generally available for green consumption from March onwards. The harvesting of sorghum usually commences in May and in June for maize, sometimes taking several weeks. Unlike other areas of Lesotho, winter wheat was not generally planted in Botsoapa and was not referred to by participants in the focus group meetings. For those households in which food reserves are exhausted in September, cash income must be relied upon to purchase most of their food for the remaining ten or eleven months of the year.

There appeared to be no fixed time to carry out other income generating activities, such as casual labour in the local area and working in areas farther afield as a migrant labourer. Clearly, however, casual labour that is connected with the agricultural cycle is tied to a seasonal timetable. Livestock is sold the whole year round, depending on when cash is required. Other activities, such as the collection of firewood, are also performed throughout the year, except

that as demand increases in the colder winter months then more time and energy are spent collecting wood and cutting trees. The management of such resources is the responsibility of the village head.

The warmer summer months, particularly December, were also identified as a period of increased risk with regard to illnesses such as cholera and diarrhoea. Clearly the occurrence of water-borne diseases is related to the decreased availability of fresh water and the higher risk of contamination during the warmer months when higher temperatures promote faster growth in the numbers of bacteria concerned.

Agricultural tasks are largely broken down along gender lines, although as mentioned above, the division of labour according to gender has become slightly less pronounced with regard to some activities in recent years, particularly in relation to weeding, for example. Men still perform the field tasks that involve the use of cattle, such as ploughing, planting and weeding. A greater proportion of women perform weeding with a hand-hoe although men are increasingly involved and the whole household participate during the busy harvest months.

There was little overt involvement by the Government in the village, especially in relation to assistance with agricultural services. The recent introduction, in 2005, of a state old age pension for those over 70 years of age is important and seven pensioners, from five households, collect the monthly pension of M150 per person. Apart from a Government-sponsored veterinarian who was qualified to administer injections to animals and who visited the village when required, there was little evidence of government support for agriculture. Two NGOs were active in the village, one a locally based NGO and the other an international NGO that had been operating in the area for over ten years. The former was involved during the fieldwork period in a food-for-work scheme whereby participants were instructed on the use of a method of conservation agriculture. Conservation agriculture encompasses a broad array of methodologies, all of which aim to minimise the disturbance to soil by reducing or abandoning any ploughing of the land or hoeing with draught power and it is

now being widely promoted in Lesotho, a country with very high erosion rates, by the Ministry of Food Security and Agriculture and agencies such as the Food and Agriculture Organisation (FAO).



Plate 5.3 Conservation agriculture project in Botsoapa, terraces with retaining banks of earth are constructed and wood ash mixed with manure is used as fertiliser.

The project in Botsoapa involved the creation of troughs and banks (Plate 5.3) and the use of natural fertiliser such as wood ash and manure for the cultivation of food crops. The work was intensive and involved one member from each participating household working on the project two mornings per week. In exchange for the work, 50 kg of rice (in bags donated by Taiwan) was provided to each participating household every two months. It was primarily women who participated in the project, a trend common among food-for-work projects in Lesotho as opposed to cash-for-work, which tends to be more attractive to men. Based on discussions with the participants, the emphasis for

the majority of those involved was on the food they were receiving for the work rather than any whole-sale adoption of conservation agriculture. As a result, as soon as deliveries of rice were delayed, work stopped on the fields and participants lost interest.

The other NGO active in the village, an international organisation, is involved in a child sponsorship programme and in return for food aid received by the households of the sponsored children, letters from and photographs of children are sent back to sponsoring families in the MDCs in order to maintain a level of personal contact.

Many of the households in Botsoapa rely on agricultural activities to bring some cash income into the household, with weeding, harvesting and threshing all being important income-generating activities, particularly for poorer households. The collection of firewood is also important, although this strategy appears to be reserved for the poorest households. As noted in some livelihood studies on Lesotho (Hall & Gay, 2000; Turner, 2001), beer brewing is a popular strategy too, with the local beer *joala* being brewed from fermented sorghum. Chapter 6 will demonstrate that remittances make a very important contribution to a household's income for those families that receive them. Some women from the village have migrated to Maseru to find work in the textile factories, often leaving their children in Botsoapa. Given the long work hours in the factories and the relatively high cost of living in an urban area where transport and rent must be paid for and food purchased, these women often choose to leave their children in the care of relatives. If possible, remittances will be sent back to Botsoapa, but often there is little left over once expenses have been paid.

Another reason why children are often left now in the rural areas is due to the lower rates of marriage. For women who migrate to seek employment in the urban areas, long periods of time are spent either at work or searching for employment and therefore, it is often more suitable to leave children at the family household in the rural area, than minding them whilst being employed or seeking a job. Women who are economically independent often view marriage

more as a burden than a useful social institution, given the current economic situation in Lesotho. Households receiving remittances are typically the households that also then have the capacity to engage in enterprises, such as establishing small informal shops or purchasing goods, such as clothes, in bulk and then selling them on at a profit in the village. Other livelihoods that feature prominently are related to more skilled labour activities, such as house building, thatching, as well as repair work on items such as radios and shoes. The availability of such work is sporadic, however, and typically displays similar patterns of seasonality that govern agricultural activities.

A final category of livelihood strategies that is important for a number of households in Botsoapa is that of traditional medicine, especially given the location of the village near sources of plants used in traditional medicine. Three men from Botsoapa practiced as licensed traditional healers, and two others obtained an income from selling medicinal plants. The traditional healers always worked in the urban border towns or in rural areas in other districts and spent much of their time away from the village. It was not clear why this was the case, but two reasons appeared to play a role in their decision to work away from their home areas. First, urban areas in Lesotho tend to be wealthier and therefore there is higher earning potential in these areas. Second, a certain level of mobility and detachment is perhaps an advantage in helping to maintain the authority and influence of a traditional healer. Traditional healers are the nearest category of worker in the village who could be considered to be receiving a regular cash income for work they did, apart from the small number employed in formal wage labour.

Vulnerability assessments for the Northern Foothills region note that sales of food crops contribute significantly to the income of wealthier households (LVAC, 2005; 2006b). However, such income is affected detrimentally by low market prices, as a result of the influx of cheaper South African maize. Large-scale and highly mechanised farming production ensures economies of scale in South Africa that Basotho farmers cannot compete with. Any buying and selling of food crops in Botsoapa takes place informally rather

than in the markets. Maize is brought to a mill in Ha Mantsi for grinding as and when necessary. Similarly, any market infrastructure for the sale of livestock or their products, apart from wool and mohair, are not well developed in the area. While wool and mohair were important sources of income in the past, they are insignificant in Botsoapa now.

A number of hazards, particularly drought, combined with the potentially high levels of vulnerability in Botsoapa and the foothills region are causing particular hardship. This situation is exacerbated by the sensitivity of the staple, maize, to the erratic rainfall patterns that the area has been experiencing of late. Other threats affecting the area are frost (again principally affecting maize), pests (especially the stalk borer) and livestock disease (especially black quarter for cattle and diseases affecting poultry). Response strategies at the village level to such occurrences include: switching expenditure from non-essential commodities, such as beer, to staple foods; reducing food intake; kinship and community support; increased sale of livestock and livestock products; increased seeking of casual labour opportunities (LVAC, 2006), and cannabis cultivation.

There are two political strands to be considered when describing governance in Botsoapa, namely the *serena* (chieftainship) and the local government, as mentioned in Chapter 3, section 3.1. The position of village headman (or headperson, as there are many female chiefs too in Lesotho) is one that is inherited. The current headman of Botsoapa, Ntate Pule, is the son of the former headman (Ntate Khotso), who handed over the position due to old age and restricted mobility. Until recently, Ntate Pule's primary responsibilities would have included the allocation of land for agriculture and building, arbitrating on minor disputes in the village, providing proof for sales of livestock and overseeing the management of pasture along with the grazing committee. In April 2005, however, and as mentioned in Chapter 3, the long awaited process of decentralisation finally saw the election of local councillors and the establishment of local government councils. Many of the responsibilities of the chieftainship were transferred to the new local government, despite few

resources and little prior training for the new councillors and the council's administration.

The exact role and purpose of the new local councils had been poorly communicated to the public, at least in Botsoapa. Having elected a woman from a neighbouring village to be their local councillor, people in Botsoapa were dismayed when they ran into confrontation with her over illegal grazing on rangeland that had been declared off-limits and they felt unable to access the local council. Drawing on particular events that occurred during the fieldwork period, the conflict over governance between the chieftainship and the local government council will be examined in more detail in Chapter 7.

Aside from this political dichotomy that exists in Botsoapa, another dichotomy, especially in terms of potential future livelihood trajectories, is the clash between what can be tentatively referred to as traditionality versus modernity. A prime example of this concerns the discord between the role of formal educational institutions and traditional initiation schools. Common in many forms across Africa, traditional initiation schools in Lesotho involve attendance, for an extended period (usually up to six months), of both young men and women at separate institutions. At the schools they are taught Basotho folklore and culture, as well as being subjected to harsh physical conditions whilst living at high altitude in the mountains. Although many Basotho contend that both formal schools and initiation schools can happily co-exist, many others display allegiance to one over the other.

A number of young men in Botsoapa during the fieldwork period left high school in order to attend initiation school, despite being a year or two away from matriculating. Usually their families, who had been paying their school fees, were very much against such a move. It is very unlikely that such students would re-attend high school and their parents declared that they were henceforth independent and would not receive more money from them.

The main motivation for attending initiation school for these students, based on discussions with them, was that they wished to go through the process of initiation with their friends who did not attend school but were of

similar age. Generally the media in Lesotho views the initiation schools negatively, as do the better-off urban dwellers as well as wage workers. There is an argument that initiation schools have a meaningful role to play, as formal education provides only a tiny minority of its graduates with a skill-set that will be useful and applicable in today's Lesotho. Despite the negative associations with promoting violence and hyper-masculinity, these schools may also teach young men how to be responsible adults and adaptive to the circumstances that they now find themselves in. These are also typically the young men who will return to subsistence farming and the land after initiation. Conversely, any prospect of finding employment in the formal economy in Lesotho or South Africa will be greatly diminished if a student fails to matriculate, given the enormous number of unemployed qualified school-leavers. Yet such students can find themselves in limbo, having obtained a formal education yet able to do little with it. Subsistence farming does not hold much allure or indeed promise at this point, yet aside from migration few other options remain. Migration in the current era, either within Lesotho or to South Africa, is becoming an increasingly uncertain strategy and no longer represents the same opportunities.

This chapter has highlighted some of the characteristics of Botsoapa. A comparison of data collected in Botsoapa with other available baseline data for the foothills region, indicates that, while some of the demographic data concur with the other data examined, important differences exist. Particularly noticeable are the lower rates of landlessness and higher rates of livestock ownership in Botsoapa than average figures for the foothills region. Some comparisons need to be qualified, however, by noting that the available data were gathered seven years prior to this project and circumstances may well have changed in the interim. If changes had occurred, however, they would have been expected to go in the opposite direction – namely, an increase in landlessness and a decline in livestock ownership rates. Such trends would be in line with existing trends elsewhere in Lesotho (Hall & Gay, 2000; Turner, 2001).

Chapter 6: Cannabis in Botsoapa

The first section of this chapter begins with an examination of the history of cannabis in Botsoapa and is followed by an outline of the cultivation practices of cannabis and the transition from crop to saleable product. The remaining sections of the chapter present and analyse the results of the quantitative data that was gathered by means of household surveys, visual evidence and semi-structured interviews.

6.1 The cultivation and trade of cannabis in Botsoapa[22]

6.1.1 The history of cannabis in Botsoapa

Cannabis has been cultivated in Botsoapa and the surrounding villages for all of living memory, which means for at least the past eighty years and perhaps since the founding of the village over 100 years ago. Production was initially limited to small plots that were sufficient to meet the demands of the elders who used cannabis in cultural practices and for traditional healers who prescribed it for medicinal purposes. Elders used pipes for smoking cannabis as well as a method that involved digging a hole in the ground and smoking the cannabis through a funnel to filter it. Cannabis was also used as a medicine to treat conditions such as asthma (by using its stem and roots to make an infusion) as well as to treat animal illnesses, especially horses with stomach problems.

As the system of migrant labour became established cannabis began to be transported to the mines in South Africa for sale. One respondent from Botsoapa was arrested in 1957 for carrying cannabis that he was bringing to the mines to sell. As cannabis production grew to supply the demand created by the availability of cash incomes in South Africa's industrial centres, its cultivation was initially associated with the more inaccessible villages in the area, such as Botsoapa, that lay some distance from the main road. In Botsoapa itself, cultivation was said to have increased dramatically in the post-independence period. Some informants attributed this to Jonathan Leabua's regime and the tolerance he and his security forces displayed towards cannabis production, although this has been disputed and cited as an example of romanticism on the part of the villagers (Thabane, 2006). Further increases in production occurred in the late 1980s and early 1990s, corresponding with the permanent return of the retrenched Basotho mine workers to Lesotho. Some people even began to move from more accessible villages in the area, that lay near to the main road and its associated services, to more isolated villages for the sole reason of being able to grow cannabis (Moji, 2006). This created an

[22] This section (6.1) draws primarily on informal discussions that were held during fieldwork in Botsoapa.

unusual migratory movement of people who were previously living in areas that had better access to services to more remote and poorly serviced locations, which enabled a household to profit from the cannabis trade.

During the period of mass labour migration by Basotho men to South Africa, women in Lesotho were primarily responsible for agricultural production as well as the maintenance of the household and the rearing of children. Agricultural production included both food crops and cannabis. Women were also responsible for the sale of cannabis and would therefore have had considerable control over the income derived from its sale. Women in Botsoapa agreed during conversation that they had much more control of the income from cannabis during this period than in the years since retrenchment began in the late 1980s, after which date fewer men were employed in South Africa. It appears that, in many cases, returning men have asserted control over this key household income.

6.1.2 Cultivation practices

Cannabis is a hardy crop and has several ecological advantages over other crops that would normally be cultivated in Lesotho. Cannabis is much more tolerant of drought than most of the other principal crops, particularly maize, for example (Leggett, 2006a; WFP/FAO, 2007). Given its relatively short lifecycle of three to four-months, cannabis is also capable of producing two or even three crops in the agricultural season, although yields may be affected by nutrient depletion in the soil. In practice, usually between one and two crops are planted in a given season. While cannabis can grow in nutrient deficient soil types, such as sandy-soil, it prefers loams that are rich in nitrogen (Leggett, 2006a). While manure is an excellent fertiliser for cannabis, most farmers do not have enough livestock to provide sufficient quantities of manure for their fields. This shortage of manure in Botsoapa means that artificial fertilisers are often, though not always, used when cannabis is planted. This increases the financial inputs needed to cultivate cannabis. The principal reason for not applying artificial fertiliser is the financial expense of purchasing

supplies in the first place. A second reason, that came to light during the fieldwork whilst working with farmers, is the belief that the application of artificial fertilisers leads to a poorer quality of cannabis in terms of its potency as a drug.



Plate 6.1 Fields are prepared during the winter months by burning the scrub before ploughing

Fields are prepared for the first planting of cannabis during the winter months. Many of the plots used for cannabis are situated on the very steep slopes that rise up behind the village (see Plates 6.1 and 6.2), where scrub bushes and their roots have been cleared, with the ash providing some nutrients for the soil and the ground is then ploughed. Once exposed, the soil on these slopes is subject to high rates of erosion and run-off. One woman said that once an area is cleared the plot might be productive for an average of about six years. During this period yields would gradually diminish until planting was not worthwhile. While she recognised that crop rotation would increase the

longevity of a field's productive period, cannabis was planted every season on these higher slopes until the plot could either no longer support cultivation or artificial fertiliser had to be applied to improve fertility.



Plate 6.2 Cleared fields on very steep slopes are vulnerable to erosion

An important characteristic of cannabis is its ability to survive weather extremes. Farmers described how cannabis could lie dormant in the ground as a seed for a long time until conditions were suitable for germination. Some farmers even plant cannabis in early winter and the seeds lie dormant, unaffected by severe frosts and snowfalls, until suitable growing conditions occur in early spring. In contrast, the timing of the planting of maize is often a gamble. Farmers will wait for the first rains of spring, but if these are insufficient or arrive too late, as has frequently occurred in recent years, then the crop can fail. Indeed in some cases the most productive cannabis fields had not even been planted in the season I spent in Botsoapa. These fields were instead the

product of fallen seeds from the previous season's crop that had simply been interred by ploughing during the winter months.



Plate 6.3 Cannabis seeds being planted with ox-drawn planter

Cannabis seeds are sown both by hand and with the use of ox-drawn planters (see Plate 6.3), depending on the size and accessibility of the field being planted. In the past the plots used for cannabis would typically have been small areas cleared of scrub, concealed from view by surrounding bushes. Nowadays, fields of up to 1 acre (the largest field was 4,220 m²) are planted, solely with cannabis[23]. These fields are in plain view of anyone visiting the village; indeed, anyone entering the village on any of the main approaches cannot fail to pass by or through fields of cannabis in the summer months. Those farmers without access to oxen or planters will need to hire someone to do the planting for them. As with other crops, the use of artificial fertiliser is

[23] See Appendix IV.

commonplace in Botsoapa when planting cannabis, sometimes accompanied by manure from the *kraal*[24], if the farmer has animals. A typical ratio of cannabis seeds to fertiliser to manure when planting is approximately 1:5:20[25].

Seahlolo, or sharecropping, is a long-established practice in Basotho agriculture and is still practiced by 15% of households in Botsoapa, although it was more prevalent with food crops than cannabis. In some cases sharecropping is used as a means of retaining rights to land by landholders who no longer live in the village. Since under the customary laws of Lerotholi, one's right to land can be withdrawn if the land is allowed to lie fallow for more than two years, while absentee landholders can retain their fields through sharecropping arrangements. A common arrangement for sharecropping on fields to be planted with cannabis is for the owner of the field to provide the land while the sharecropping partner takes care of ploughing the field, and planting and weeding the crop. The two will then share the costs of hiring help to harvest the crop and the produce will be divided evenly between the owner and the partner.

As with the traditional food crops grown in Lesotho, cannabis requires at least one weeding during its lifecycle to ensure its productivity is optimised. Unlike other crops, the weeding of cannabis involves not only the removal of surrounding weeds but also the removal of *majaja*, or the male plant, as cannabis is dioecious. Since the unfertilised female plant produces the best quality drug, removing the male plants is regarded as being worth the effort, especially as the male and female plants are relatively easy to distinguish. The removal of the males usually occurs when the plants are approximately 30 cm tall. While the *majaja* plants are often just burnt once they are uprooted, they can also be used for fodder for horses. Sometimes they may be mixed with dried cannabis to add extra volume. In some cases *majaja* may be sold on its

[24] An animal enclosure

[25] This ratio was observed being used by the author on a number of occasions, and confirmed by farmers as a typical ratio that would be used, although it is dependent on the ability of a farmer to purchase the fertiliser or on the availability of manure.

own, although this is a relatively rare event, as it tends to fetch very low prices (a figure of M60 for each 50kg maize bag full was given in one case[26]).



Plate 6.4 Picking the leaves and seeds from the cannabis stem and drying them on a tarpaulin

The principal way that farmers determine when cannabis is ready to be harvested is by testing how sticky the heads of the female plants are as a result of resin secretions. Harvesting is a social event that often involves up to eight or ten people, usually women, sitting around a tarpaulin and picking the buds and leaves from the cannabis stem (see Plate 6.4). 52% (17 out of 33) of the households in Botsoapa identified cash from harvesting cannabis for other households as a source of income. Until the past fifteen years or so, such harvesting did not involve any cash being exchanged but was rather carried out

[26] Interview with Ntate Phallong on 10.01.2006

by *letsema*[27] and the brewing of *joala* (fermented sorghum alcohol). However, at M10 per person per day, harvesting cannabis for others remains well below other forms of wage employment. On occasion, if pickers travel to other villages, they may receive up to M20 per day. An alternative sometimes offered to pickers is a share of the crop rather than payment in cash: up to five litres[28] of picked cannabis per day. As five litres was worth between M10 and M20 during the research, depending on the season, this can be more lucrative than receiving cash. Owners of the crop, however, generally prefer to pay cash, as the cannabis will be worth more to them (Pheko, 2006a).

Once harvested the cannabis is dried in a couple of days, usually on a tarpaulin in the open air, outside of a household. In the past it was dried indoors or under the shade of trees, but as this prolongs the drying period and consequently increases the risk of being caught, the practice no longer occurs. As Leggett (2006b) notes, however, drying cannabis in direct sunlight reduces the potency of the drug by lowering the principal psychoactive compound (THC), so the overall quality of the narcotic properties of cannabis plants in Botsoapa may well be adversely affected. Following drying, cannabis leaves and seeds are stored inside the houses, normally in 50 kg maize bags.

6.1.3 Selling and exchanging cannabis

Like elsewhere in Lesotho, the cannabis grown in Botsoapa is destined primarily for the South African market (Laniel, 1998). For the most part, three or four transactions occur between growers in Botsoapa and consumers in South Africa[29]. The first transaction occurs when local smugglers, generally residing near the sealed road, purchased cannabis from the farmers in Botsoapa. Such exchanges could involve the purchase of many 50 kg maize bags full of cannabis herb. More commonly someone would arrive in the village, often

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[27] *Letsema*: a co-operative work party that is called to carry out a variety of agricultural work such as digging, sowing, harvesting and so forth (see Chapter 3.3.1).

[28] Varying sizes of old plastic containers were the most common form of measurement of transactions involving cannabis. Five, ten and twenty-litre containers were the most common.

[29] Apart from interviews with SAPS and secondary sources, there was no similar in-depth research undertaken in South Africa so it is speculation as to how many levels are involved in distribution networks within South Africa.

extended family members from farmers living in the village, and they would move from house to house buying 5, 10 or 20-litre containers of cannabis and filling one or two 50 kg maize bags. In the larger exchanges a vehicle or team of donkeys would be used to transport the cannabis from Botsoapa to the sealed road. For smaller volumes of one or two bags, individuals would carry the loads themselves. Ha Mantsi, the village situated where the sealed road ended and from which fan out a number of deep valleys, was a centre of activity after dusk. South African registered *bakkies*[30] would arrive, be loaded-up with cannabis that was being stored in houses near the road and then cross back into South Africa at one of the border crossings over the Mohokare River, such as the Maputsoe/Ficksburg border post. Alternatively, local Basotho smugglers, having contacts in South Africa, would cross the border themselves and exchange with smugglers in South African towns. In fact many people who had grown up in the area now lived in South Africa and nearly every family would have had friends or relatives living in South Africa. Social and kinship ties were also important between growers in Botsoapa and buyers coming to purchase cannabis, as well as for those growers who brought cannabis to towns such as the capital, Maseru, or across the border to South Africa. Since police tend to target traffickers rather than growers, there is a much greater risk of having encounters with the police when moving cannabis to urban areas, but the higher profit to be made, up to a 100% increase, make it worthwhile for some.

The market price of cannabis, certainly at the grower's end, experiences large seasonal price fluctuations. Lows of M150 for a 50 kg maize bag of cannabis were common, while farmers recollected highs of up to M1000 per bag in recent years[31]. There are a number of factors affecting the price of cannabis. First, as stocks of cannabis diminish before the first harvests are brought in during December or January, the price peaks, falling off as more of the crop is harvested. Second, as with most agricultural activities, climatic factors cannot be ignored, and rainfall variability can affect the timing and yield

[30] Afrikaans term for a pickup truck.
[31] Slightly less accessible villages than Botsoapa experienced lows of M100 per 50 kg maize bag of cannabis when the research was being conducted.

of the harvest. Third, increased police activity, either on the South African or Lesotho side of the border, can discourage traffickers from smuggling cannabis until police attention is reduced or diverted elsewhere (Pheko, 2006a). The first factor, concerned with the annual price fluctuations, is particularly important with regard to the ability of a household to maximise their profit from their harvest. If the household is food sufficient and does not require immediate income from the sale of the harvest, the cannabis can be stored until prices are higher. Many households in Botsoapa, however, were unable to maximise their return on the harvest in this way and instead often had to settle for lower prices.

Exchanges of cannabis in Botsoapa extend well beyond simple transactions of cannabis for cash, to systems of bartering and savings schemes. Cannabis is often bartered for other goods that are brought by people to the village. The range of goods involved in such exchanges varies widely, but the main categories include meat, clothing, household items such as soap, and goods of more dubious origin, in terms of the way in which they were acquired, such as solar panels and car batteries. The latter are often brought in by South African smugglers coming to buy cannabis in the area. Nearer to Ha Mantsi a not uncommon sight, as observed during the fieldwork, is local smugglers driving around in cars that have been stolen in South Africa and smuggled in by South African traffickers in exchange for cannabis.

Kinship lines were often an important method of finding trustworthy smugglers and as a means to move cannabis from the village to urban areas. Local smugglers who came to Botsoapa to purchase cannabis, for example, were often extended family members of households in the village. Similarly, family members who lived in urban areas, such as Maseru, formed an important link in bringing cannabis directly from the village to an urban area without selling to middlemen. People from Botsoapa would travel to Maseru with a suitcase or sports bag full of cannabis, stay with their relations and sell the cannabis for a much higher price than would have been received in the village. The difficulty with this form of trade is that only a relatively small amount of cannabis could be

carried, as people had to travel on public transport and could only carry an amount that they could conceal in a bag.

In some cases, even cannabis growers from Botsoapa will walk to more remote villages in the area in order to purchase cheaper cannabis, which is then transported to Maseru. This process is often part of a cyclical trade, in which basic household products, such as soap and insect repellent, are brought to the villages and exchanged for cannabis. The people then bring the cannabis to Maseru, sell it, and then with the money purchase more basic household products, returning to cannabis growing areas to repeat the process while pocketing a very small profit once commodity and transport costs are subtracted.

6.2 Assessing the importance of cannabis in Botsoapa

6.2.1 Field and crop survey results[32]

The purpose of the field and crop surveys in Botsoapa was to estimate the overall importance of cannabis in relation to food crops, to estimate total yields of both staple foods and cannabis, and to compare any changes in planting patterns between the two surveys. Field sizes in Botsoapa range from very small, irregular-shaped plots (beginning at 35 m^2) to much larger fields (up to 6112 m^2). Figure 6.1 illustrates the distribution in size between the 425 fields that were in Botsoapa in December 2006. According to the graph the majority of the fields in Botsoapa are less than 2550 m^2 in area. Only 14 fields in the village had an area greater than 2550 m^2 although these fields accounted for almost 14% of the total area of arable land.

The first crop survey was carried out in April 2006. April is a good month to conduct a crop survey in Lesotho, as it is a period when most crops are in the ground awaiting harvest. Table 6.1 shows the values (in hectares and percentages) that each of the main crops accounted for with regard to the total

[32] See Appendix IV for a complete listing of all fields, their areas, and the results of the crop surveys.

area of all the fields in Botsoapa[33]. Cannabis, grown alone (35.6%) and intercropped (3%), accounts for 38.6% of the total planted area in Botsoapa (39.64 Ha). Of the 19 fields where cannabis was found growing with other crops, 11 fields had cannabis intercropped with maize; five fields with *spaile* (spinach); and the three remaining fields with *moroho* (leafy vegetables), potato and sorghum respectively. The primary motivations for intercropping include a desire to conceal cannabis production, as well as a means of maximising both food and cash returns from the field by combining cannabis with a food crop.

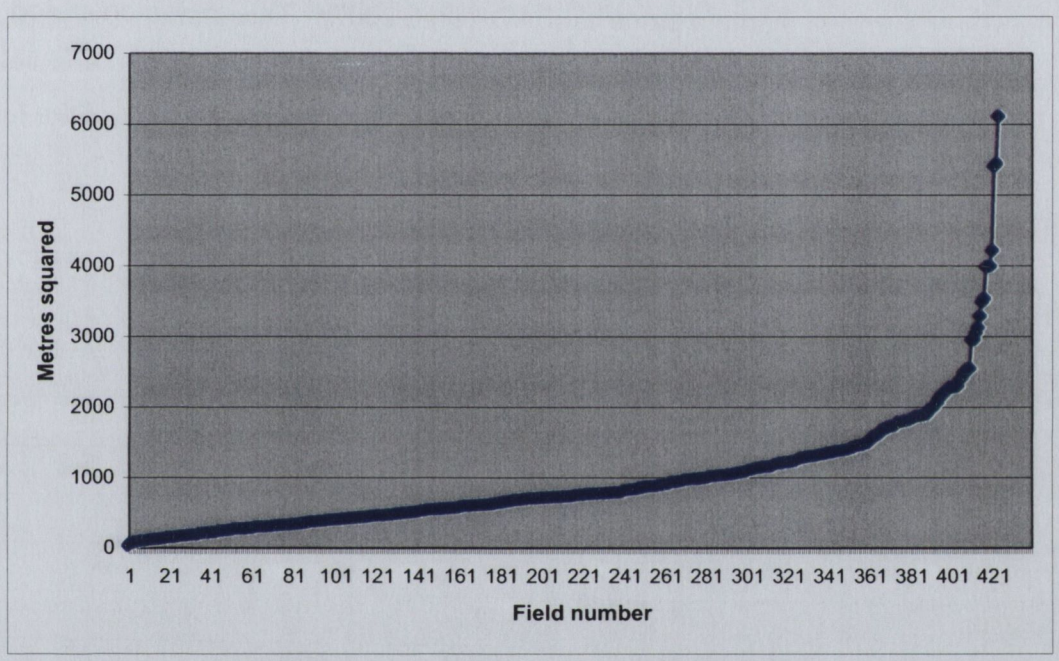


Fig. 6.1 Area of arable land in Botsoapa by individual field - fields ranked in order of increasing size (December 2006)

The total area allocated to cannabis (38.6%) is very similar in size to the land devoted to the staple food crop, maize (41.3%). Sorghum, used especially for porridge as well as for brewing alcohol, ranks third, at 10.6% of the total planted area. The remaining 9.6% is accounted for by fallow land and other crops such as *moroho* (leafy vegetables) and *rapa* (turnip). A final category,

[33] A complete list of all crops recorded in each field is included in Appedix IV. Beans were the principal secondary crop to be intercropped in fields but as the overall importance of second and third crops in fields is relatively small in Botsoapa and for the purposes of this study, they will not be considered in great detail.

none (2.7%), recorded fields where ploughing had occurred but no crops were planted in the ground. In such cases the farmer had either not yet planted the crops or, despite having ploughed the field, had not been able to plant because the necessary inputs, such as artificial fertiliser and seeds, were unobtainable.

A second crop survey in December 2006 recorded the crops planted as well as noting three newly created fields, bringing the overall total to 425 fields. This represented a 0.6% increase in total field area from 39.64 Ha to 39.91 Ha. The results of this second survey must be understood in light of the drought conditions that prevailed throughout Lesotho in late 2006, which significantly hampered normal planting patterns (FAO/WFP, 2007). This is demonstrated by the much higher percentages of both land lying fallow (fallow, 33%), and fields that had been ploughed but not planted (none, 7%). Therefore 40% of the land lay empty at a time when crops would normally have been planted[34].

Crops	**Apr 2006 (*Ha*)**	**Apr 2006 (%)**	**Dec 2006 (*Ha*)**	**Dec 2006 (%)**
Cannabis (alone)	14.10	35.57	7.49	18.77
Cannabis (mixed)	1.20	3.03	3.27	8.19
Maize (alone/mixed)	16.37	41.30	8.52	21.35
Sorghum (alone/mixed)	4.20	10.60	4.49	11.25
Fallow	2.45	6.18	13.16	32.97
None	1.06	2.67	2.80	7.02
Other	0.26	0.66	0.19	0.48
All	**39.64**	**100.00**	**39.91**	**100.00**

Table 6.1 Crop distributions by area and percentage in Botsoapa in April and December 2006

[34] Both average yields and total area planted showed major falls across Lesotho in the 2006/2007 agricultural season as a result of one of the most severe droughts of the last 30 years. The FAO/WFP (2007) warned that over a fifth of the population (401,200 people) faced food insecurity during the forthcoming year of 2007/2008. Average yield for maize and sorghum decreased by 42% and 25% respectively from the 2005/2006 season and the total area planted with these staples dropped by between 15-20% nationally, although the worst affected areas were in the southern districts.

For the crops that were recorded during the December survey, cannabis accounted for 6.3% of the total area (5.8% for cannabis planted alone and 0.5% for cannabis that was intercropped). Maize (both alone and intercropped) covered 21.3% of the total area while the other food staple, sorghum, accounted for 11.2%. Other crops (namely wheat and beans) accounted for just 0.5%, although beans were intercropped with maize in a number of fields.

Table 6.2 shows the percentage change between the hectares planted in each crop category from the two crop surveys in April and December 2006. The two principal crops (cannabis and maize) have both decreased by almost 47% and 48%, respectively, in terms of the area they occupy. Conversely fallow land increased by 437% between the two seasons. This can be explained by the severe drought of late 2006 (FAO/WFP, 2007). Sorghum experienced a modest increase of just under 7%, perhaps due to its greater drought resistance. The higher value for the none category shows that, while fields had been prepared (i.e. ploughed) prior to the December survey, they had not yet been planted with any seeds.

Crops	**Apr 2006 (*Ha*)**	**Dec 2006 (*Ha*)**	**Percentage change %**
Cannabis (alone)	14.10	7.49	-46.90
Cannabis (mixed)	1.20	3.27	172.50
Maize (alone/mixed)	16.37	8.52	-47.95
Sorghum (alone/mixed)	4.20	4.49	6.90
Fallow	2.45	13.16	437.14
None	1.06	2.80	164.15
Other	0.26	0.19	-26.92
All	39.64	39.91	0.68

Table 6.2 Percentage change for each crop category between April 2006 and December 2006

Further comparisons can be made between the two surveys to examine agricultural practices such as crop rotation, bearing in mind that the December survey was conducted in an exceptionally dry season, with much of the land remaining fallow (Table 6.3). For food crops grown in the village, only 21 fields (or 5% of the total number of fields in the April survey) changed from one food crop to another food crop. 51 fields (12.1%) changed from cannabis to another crop (primarily maize) or visa versa. 103 fields (24.4%) changed from cannabis to lying fallow or visa versa. In fact, in this category only three fields went from being fallow during the April survey to having been planted with cannabis in December, while 100 fields went from cannabis to being fallow.

21 fields (5% of fields) changed from a food crop to another food crop.

51 fields (12.1% of fields) changed from cannabis to another crop or visa versa.

103 fields (24.4% of fields) changed from cannabis to being fallow or visa versa.

151 fields (35.8% of fields) had the same crop in both surveys.

39 fields (9.2% of fields) remained fallow in both surveys.

**only based on the original 422 fields from April 2006. The three new fields created in the interval between the April and December surveys all contained cannabis in December.*

Table 6.3 Changes in crop patterns between April and December 2006 in Botsoapa

This was most likely due to the drought conditions rather than a system of rotation. A total of 151 fields (35.8%) supported the same crop planted in them in both surveys. This number would no doubt have been considerably higher if a large proportion of fields had not been lying fallow during the second survey. Finally 39 fields (9.2%) were fallow in both the April and December surveys.

Figures 6.2 and 6.3 illustrate the distribution of the principal crops (maize, cannabis and sorghum), as well as the two other categories of fallow and none, according to three categories of field size, small (less than 500m²), medium (greater than 500 m² but less than 1000 m²), and large (greater than 1000 m²). In April 2006 (Fig. 6.3) cannabis was common across all field sizes, although there was a bias towards the small and medium field size categories. Maize shows the opposite trend, tending to be planted in large-sized fields. Fallow fields feature more frequently in the small and medium categories than in the large category. This is interesting because one might have imagined that larger fields require larger inputs and would therefore be the first ones to be left fallow if resources were scarce. Sorghum is confined predominantly to the large fields and other crops are relatively insignificant.

Patterns for the distribution of crops across field sizes in December (see Fig. 6.4) are less clear, because of the drought conditions and the large areas of land that were not planted in December as a result. Looking at the fallow/none category, all field sizes appear to be have been more or less equally affected, with medium and small sized fields being slightly more affected than fields in the large size category. Both maize and cannabis exhibit relatively even distributions, given the sample size. As in the April survey, sorghum was predominantly planted in the larger fields and this pattern was also evident in December.

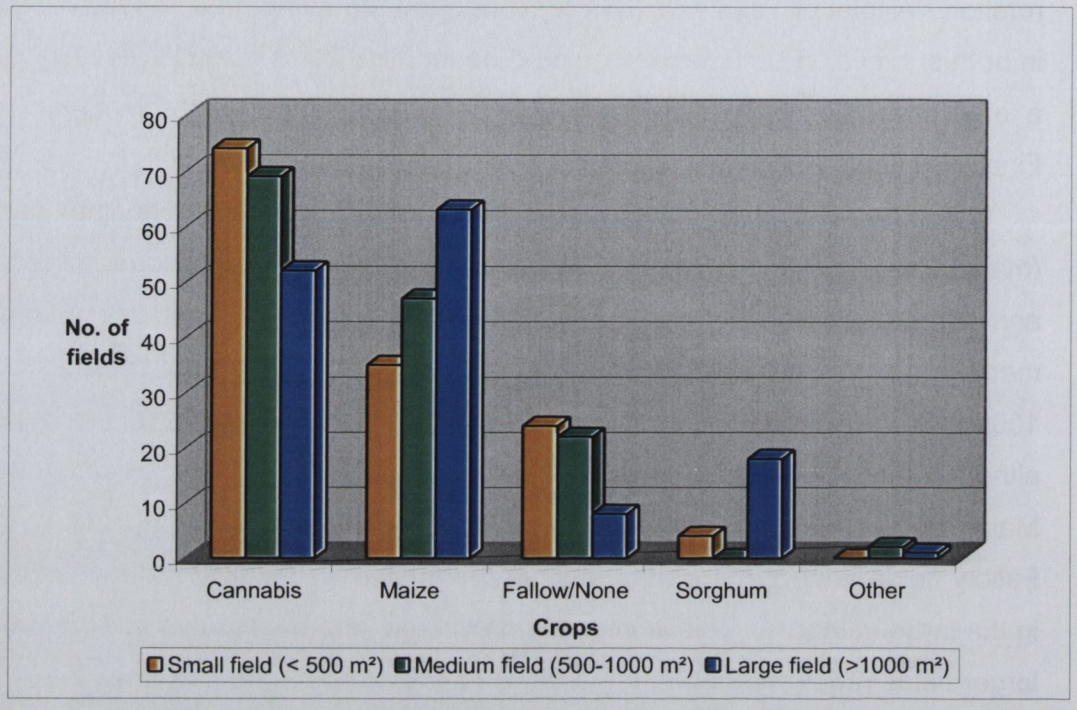


Fig. 6.2 Distribution of crops between small, medium and large fields in Botsoapa (April 2006)

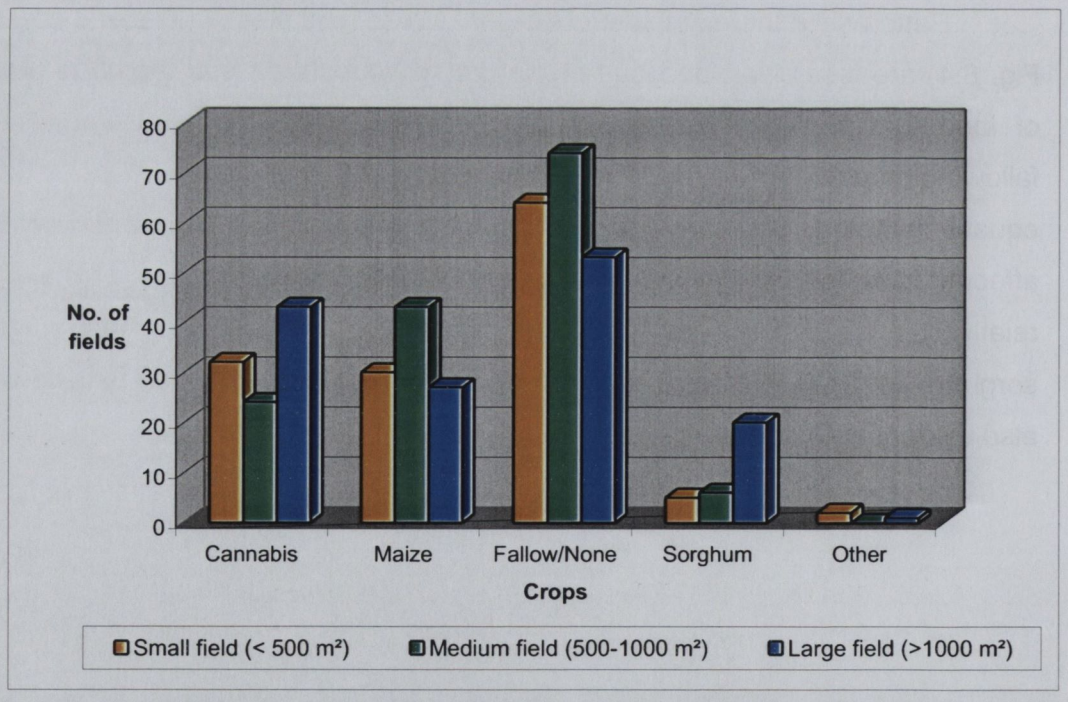


Fig. 6.3 Distribution of crops between small, medium and large fields in Botsoapa (December 2006)

Yield estimates for cannabis, maize and sorghum in 2006 in Botsoapa

Average yield estimates for cannabis were established by measuring plant densities and whole dried plant weight. Yield estimates for maize and sorghum for the 2006 season can be established using the amount of planted area that each crop occupies along with estimated average yields per hectare for each crop in the district (WFP, 2006). For food crops these estimates were compared against average per capita consumption rates to determine whether productivity was above or below subsistence levels required by the population. For cannabis, the potential net income was calculated from the estimates of yield.

Cannabis:

Density measurements:	31.88 plants per m^2
Average number of female cannabis plants per hectare:	318,000
Average weight per whole dried plant (from 25 samples):	0.01641 kg
Yields per hectare therefore are:	318,800 x 0.01641 = 5231.51 kg OR 5.2 MT

Total yields for the village of Botsoapa for the cannabis fields based on the April 2006 crop survey would be:

Cannabis alone	14.1 Ha x 5.2 MT = 73.32 MT
Cannabis (mixed – assuming the same plant density although this may be less)	1.2 Ha x 5.2 MT = 6.24 MT
Total for Botsoapa	79.56 MT

This total (79.56 MT) represents the amount of whole dried plant. The whole dried plant to dried saleable product is about 3 to 1 (Leggett, 2006) giving a saleable yield of approximately 1.7 MT per hectare or 26.52 MT for the area planted in Botsoapa.

Table 6.4 Yield measurements for cannabis in Botsoapa

The estimated volume of cannabis production in Botsoapa was calculated (Table 6.4) using measurements of average plant density and average weight per plant, and multiplying these by the known area planted with cannabis in April 2006[35]. The estimated yield per hectare of female cannabis plants in Botsoapa in 2005/06 is 5.2 MT/Ha. As this figure is based on whole dried plant samples, the yield of saleable product per hectare is approximately 1.7 MT/Ha[36]. Given that the total area devoted to cannabis cultivation in Botsoapa was 15.3 Ha, the estimated yield for whole dried cannabis plant in Botsoapa was 79.56 MT, or 26.52 MT of saleable cannabis product.

There are a number of important points that need to be considered, however, with regard to these calculations. The total cannabis yields provided in Table 6.4 most likely represent a maximum potential yield, or a best case scenario. First, some of the fields surveyed, especially on the higher slopes above the village, appeared to have very poor yields, perhaps as a result of soil infertility, as well as heavy rain (see Plate 6.5, for example). Even though the planting occurred at the same interval as other fields, plants were not growing as well as those in other fields. Second, in fields where intercropping is practiced (see Plate 6.6), cannbis is unlikely to have the same plant density as fields where only cannabis is planted. As cannabis was only intercropped in a relatively small percentage of the total field area (3% - versus 35.6% for cannabis alone), this should not have a significant effect on the overall total. Unfortunately more complete measurements of all cannabis fields were hindered by lack of access and some distrust amongst the farmers when measuring equipment was produced. Therefore the figure quoted can be regarded as the maximum potential yield for Botsoapa. Conversely, the calculations were based only on one snapshot during the agricultural season. Therefore if more than one harvest was produced from a field then this will not be included in the survey. While many farmers did say that two or three

[35] See Appendix V for both the plant density measurements and the cannabis plant sample weights.
[36] This is based on a 3:1 ratio of whole dried plant to saleable cannabis product (Leggett, 2006b).

harvests per field were possible in a season, in the majority of cases, informal observations suggested that only one harvest per field per season was likely to take place.



Plate 6.5 Fields on higher and more exposed slopes sometimes had very low yields

Using the price range that cannabis was found to sell for in Botsoapa during the fieldwork period, an estimate can be made of the net value of the cannabis harvest in Botsoapa. 26.52 Metric Tonnes (MT), the maximum potential saleable product, equates to about 803 kg per household if distributed evenly between the thirty-three households in Botsoapa. As cannabis is typically carried in 25 kg weights (worth between M150 – M500 in Botsoapa, depending on time of season) then each household would expect a maximum of 32 bags per year, which would mean an income of between M4950 and M16,072 per annum. Of course land is not distributed evenly in Botsoapa and

some households grow much more cannabis than others, so such calculations are hypothetical.



Plate 6.6 Cannabis intercropped with maize

Maize:

Total area of planted maize in Botsoapa (April 2006):	16.37 Ha
Average yield in Berea district (WFP, 2006)[37]:	0.8 MT/Ha
Estimated total production of maize - Botsoapa (2005/06):	13.01 MT

Sorghum:

Total area of planted sorghum in Botsoapa (April 2006):	4.2 Ha
Average yield in Berea district (WFP, 2006):	0.65 MT/Ha
Estimated total production of sorghum - Botsoapa (2005/06):	2.73 MT

The per capita consumption rates per year of the three principal staple crops for the forthcoming season 2006/07 were estimated to be 127 kg of maize, 42 kg of wheat, and 12 kg of sorghum[38]. Using these figures, the estimated production figures and population data gathered, an estimate of total per capita consumption rates for Botsoapa can be calculated (Table 6.5). As there was no wheat recorded during the April 2006 survey, no estimates for wheat can be produced. Consequently, an upwardly readjusted measurement for maize is also made in Table 6.5, as maize and sorghum are the principal crops in Botsoapa. This was calculated by adding the per capita consumption rates per year of maize and wheat[39].

Based on these figures of estimated production during the 2005/06 season and the estimated stocks required for the 2006/07 season, maize production in 2005/06 only may have met between 32 and 44% of total maize

[37] The average yield of crops is calculated separately by both the WFP's Crop and Food Supply Assessment Mission and the Bureau of Statistics in Lesotho. Although they sometimes arrive at different estimates, both of these surveys arrived at figures of 0.8 MT/Ha for the average yield of maize in Berea district for the 2005/06 season and 0.65 MT/Ha for sorghum (WFP, 2006).

[38] This would provide a daily kilocalorie intake of 1800 kcal per capita per day (WFP, 2006), the rest of the necessary calories being made up by sugar and oil for example.

[39] As wheat (330 kcal/100g) has a slightly lower kilocalorie per 100 grammes level than maize (350 kcal/100g) this means that this substitution results in a slightly underestimated of kilocalorie value in comparison with maize (Montembault, 2007).

requirements (Table 6.5). The gap between production and requirements for sorghum is almost negligible, with only a 0.09 MT (3%) shortfall estimated.

Maize:	127 kg x 235 (people) = 29,845 kg (29.85 MT)
Sorghum:	12 kg x 235 (people) = 2,820 kg (2.82 MT)
Wheat:	None
Maize (readjusted to compensate for no wheat):	
	169 kg x 235 (people) = 39,715 kg (39.72 MT)
Estimated maize production in Botsoapa (2005/06):	13.01 MT
Estimated maize consumption in Botsoapa (2006/07):	29.85 – 39.72 MT
Shortfall in maize production:	16.84 – 26.71 MT
Estimated sorghum production in Botsoapa (2005/06):	2.73 MT
Estimated sorghum consumption in Botsoapa (2006/07):	2.82 MT
Shortfall in sorghum production:	0.09 MT

Table 6.5 Estimated food requirements for Botsoapa for 2006/07

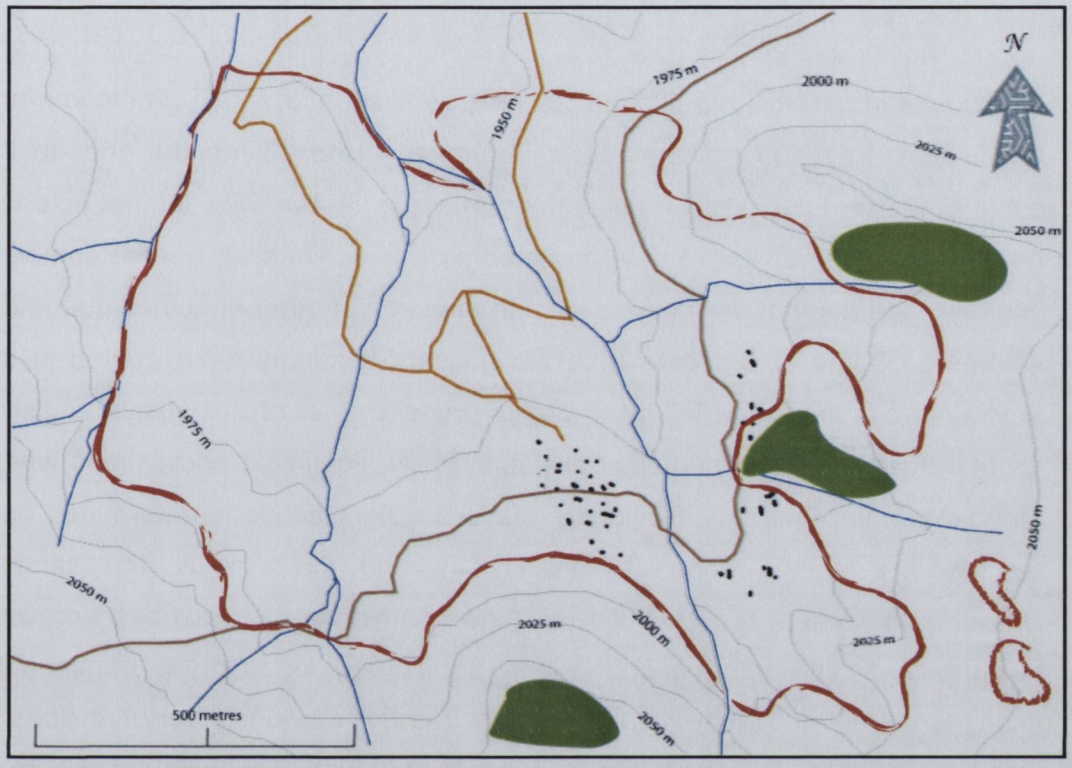
6.2.2 Historical change – visual evidence

A comparison of the 1980 aerial photograph of Botsoapa with recent satellite imagery reveals that both population density and total field area have not changed dramatically over the 25-year interval[40], although a small increase in both is detectable.

Population density was measured by proxy, by comparing the change in total numbers of buildings in Botsoapa between the 1980 aerial photograph and the recent satellite image. In the 1980 photograph, approximately 71 buildings are evident in Botsoapa. In the recent satellite image 78 buildings were

[40] The composite satellite imagery used was on Google Earth (http://earth.google.com). Individual images are not dated but based on observations such as building sites the author estimates that the image was taken in either 2004 or 2005.

counted. Therefore there is an increase of approximately seven buildings (or approximately 10% of housing stock) between 1980 and 2005.



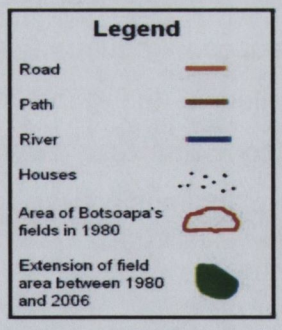


Fig. 6.4 Map of Botsoapa indicating field increases between 1980 and 2005, based on comparisons made between aerial photography and satellite imagery.

The comparison between the 1980 photograph and the recent satellite imagery was also useful to detect any marked changes in the total field area over the past couple of decades. A sketch map (Fig. 6.4) was produced from the two images after they were compared and analysed. The areas circled in red denote the boundaries of Botsoapa's fields in the 1980 photograph. The areas shaded in green are sites where new fields appeared in the recent satellite imagery but were not present in 1980. The fields that occupy these areas represent just over 1% of the

current total field area, and the increase in total field area is therefore only relatively small[41].

6.2.3 Household survey results

The household survey was designed to gather demographic and agricultural information as well as collating detailed information on income and expenditure in all 33 households in Botsoapa in the 12 months prior to the survey. These data were then used to form a quantitative data set that acted as both a verifier of qualitative data collected as well as enabling a more complete interpretation of other data collected, and prompting further enquiries during the fieldwork. Some of the data from the household survey were quoted in the preceding chapter. The following pages present a set of descriptive statistics for the survey findings and highlight statistically significant correlations where they have been found[42]. Obviously, statistical significance is determined both by the size of the computed co-efficient and the size of the sample. Correlations presented were also checked in advance for linearity by drawing scatterplots. The information sought, particularly regarding a household's finances and involvement in the cannabis trade, is obviously very sensitive to inaccurate or false reporting, and as a result must be viewed with a measure of caution. Indeed, a comparison of results from the survey with other data collected during the fieldwork reveal occasional although in some cases, large, inconsistencies. While these contradictions should not be dismissed, possible explanations are presented later in the chapter.

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[41] This is based on the area of field numbers 16-19; 139; 142; and 149-154.

[42] See Appendix II for a copy of the survey form that was used during the survey. The compiled results of the survey can be seen in Appendix VI, along with a description of the variables used in the analysis.

	N	Minimum	Maximum	Sum	Mean
Household Population	33	1	14	176	5.33
Total no. of fields	33	1	23	231	7.00
Fields (owned)	33	0	23	217	6.58
Fields (sharecropped)	33	0	6	14	.42
Livestock units owned	33	0	149	765	23.18
Income from livestock	33	0	1,400	2,670	80.91
Maize (kg)	33	0	960	7510	227.58
Sorghum (kg)	33	0	880	2800	84.85
Beans (kg)	33	0	80	502	15.21
Cannabis (kg)	33	0	1110	6980	211.52
Income cannabis (Maloti)	33	0	6,650	34,720	1,052.12
Income other crops	33	0	200	200	6.06
Income work/etc	33	0	24,040	87,965	2,665.61
Food gift/aid (kg)	33	0	620	6470	196.06
Expenditure main foods	33	0	8,558	32,396	981.70
Expenditure household items	33	96	2,334	23,981	726.70
Expenditure agricultural inputs	33	0	1,730	13,137	398.09
Expenditure education	33	0	6,650	11,215	339.85
Expenditure health	33	0	1,602	10,125	306.82
Expenditure other	33	0	5,100	47,645	1,443.79
Total cash income	33	120	24,040	125,555	3,804.70
Total cash expenditure	33	504	15,571	138,499	4,196.94
Valid N (listwise)	33				

Table 6.6 Descriptive statistics for the Botsoapa household survey

The descriptive statistics for the principal variables are displayed in Table 6.6. As noted in the previous chapter, the total population for Botsoapa during the survey was 176 people, with an average of 5.33 people per household. The total number of fields recorded during the household survey was 231, and according to the survey, no household was completely landless, although the number of fields that each household had access to (either by ownership or sharecropping) ranged from 1 to 23.

The total amount of harvested cannabis (saleable weight) recorded during the household survey was 6980 kg. The principal food crops in Botsoapa are maize, sorghum and beans, with about 7510 kg, 2800 kg, and 502 kg respectively of these crops harvested annually. A very wide range between minimum and maximum values is evident for all of these crops, with instances of no crops being produced in at least one household for each type of crop. Conversely the individual maximum values recorded at household level for the production of cannabis, maize, sorghum, and beans were, respectively, 16%, 12%, 31%, and 16% of the total for each crop.

Only one of the 33 households surveyed was not growing any crops at the time of the survey. Five households were almost exclusively growing cannabis, and another five households grew food crops but no cannabis. Figure 6.5 plots the two dominant crops (cannabis and maize) in Botsoapa against each other. While the two lines, on occasion correspond (most notably for household no.33), there is in general no discernible relationship between the amount of cannabis and maize produced evident. Calculating the correlation value at a significance level of 0.05 (Table 6.7) confirms that there is no statistically significant association between the two. This test is carried out in order to see if larger maize production equates with larger cannabis production for individual households.

Figure 6.6 shows the actual relative importance of cannabis income for each household. A great variation in income levels is evident that is lost when individual income levels are lumped at village level. For two of the households

interviewed, cannabis was the sole source of income; for six households in the study cannabis contributed more than 90% of the household income; and for 13 households, cannabis accounted for more than 50% of the total income. Similarly cannabis contributes less than 20% of the total household income in 11 households, of which six households declared they received no income from cannabis.

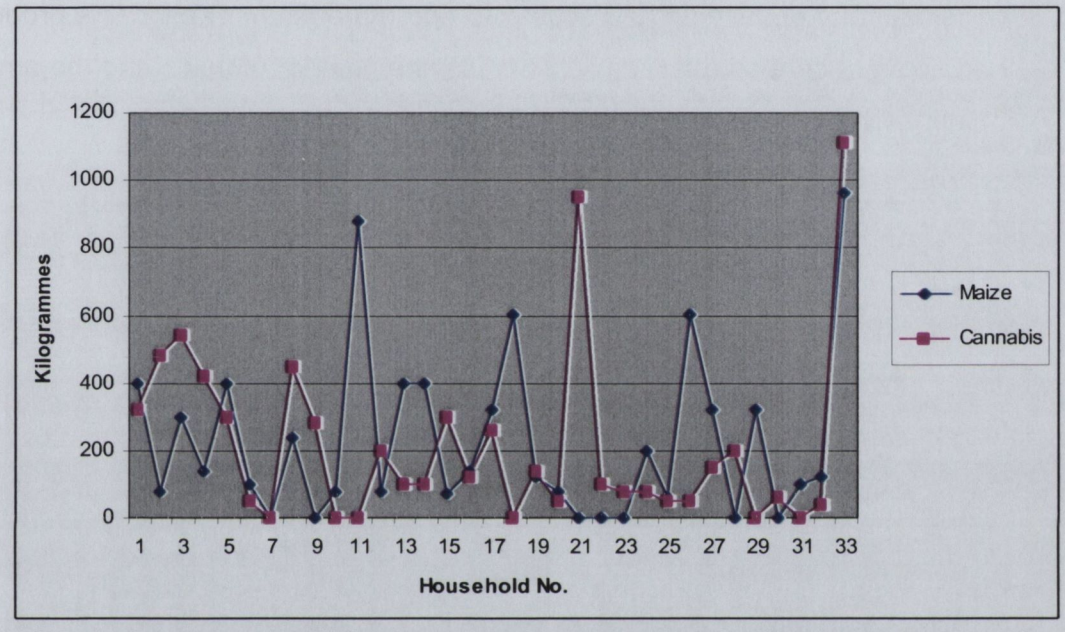


Fig. 6.5 Cannabis and maize production (kg) by household in Botsoapa

		Cannabis (kg)	Maize (kg)
Cannabis (kg)	Pearson Correlation	1	.211
	Sig. (2-tailed)		.238
	N	33	33
Maize (kg)	Pearson Correlation	.211	1
	Sig. (2-tailed)	.238	
	N	33	33

Table 6.7 Correlation between cannabis and maize produced in Botsoapa

Correlation tests between the other variables revealed some interesting patterns. The size of population of individual households in Botsoapa is significantly correlated with both the amount of cannabis harvested (Table 6.8) and the amount of maize harvested (Table 6.9), the former at significance level 0.01 and the latter at significant level 0.05. Interestingly, while the total number of fields that a household had access to and the amount of cannabis produced had no significant correlation (Table 6.10), the number of fields and the amount of maize produced was statistically significant at 0.01 (Table 6.11).

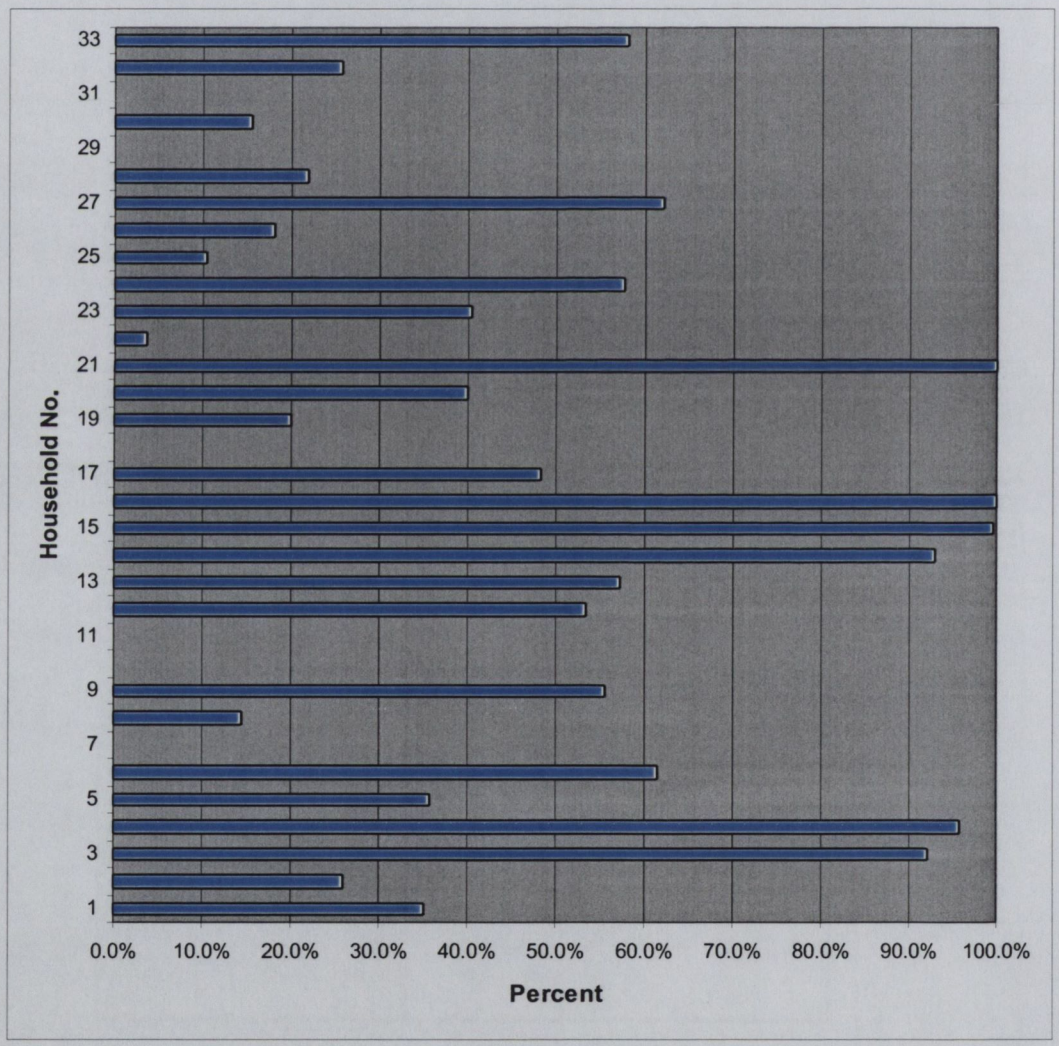


Fig. 6.6 Cannabis income as a percentage of total household income

		Household population	Cannabis (kg)
Household population	Pearson Correlation	1	.577(**)
	Sig. (2-tailed)		.000
	N	33	33
Cannabis (kg)	Pearson Correlation	.577(**)	1
	Sig. (2-tailed)	.000	
	N	33	33

** Correlation is significant at the 0.01 level (2-tailed).

Table 6.8 Correlation between household population and cannabis produced

		Household population	Maize (kg)
Household population	Pearson Correlation	1	.386(*)
	Sig. (2-tailed)		.026
	N	33	33
Maize (kg)	Pearson Correlation	.386(*)	1
	Sig. (2-tailed)	.026	
	N	33	33

** Correlation is significant at the 0.05 level (2-tailed).

Table 6.9 Correlation between household population and maize produced

		Fields_total	Cannabis_kg
Fields_total	Pearson Correlation	1	.325
	Sig. (2-tailed)		.065
	N	33	33
Cannabis_kg	Pearson Correlation	.325	1
	Sig. (2-tailed)	.065	
	N	33	33

Table 6.10 Correlation between the total number of fields and cannabis production per household

		Fields_total	Maize_kg
Fields_total	Pearson Correlation	1	.528(**)
	Sig. (2-tailed)		.002
	N	33	33
Maize_kg	Pearson Correlation	.528(**)	1
	Sig. (2-tailed)	.002	
	N	33	33

** Correlation is significant at the 0.01 level (2-tailed).

Table 6.11 Correlation between the total number of fields and maize production per household

Similarly, annual household expenditure on agricultural inputs, such as fertiliser and seed was found to have no significant correlation with cannabis production (Table 6.12), but was statistically significant when correlated with maize (Table 6.13).

		Cannabis (kg)	Expenditure on agricultural inputs
Cannabis (kg)	Pearson Correlation	1	.204
	Sig. (2-tailed)		.256
	N	33	33
Expenditure on agricultural inputs	Pearson Correlation	.204	1
	Sig. (2-tailed)	.256	
	N	33	33

Table 6.12 Correlation between expenditure on agricultural inputs and cannabis production

		Maize (kg)	Expenditure on agricultural inputs
Maize (kg)	Pearson Correlation	1	.455(**)
	Sig. (2-tailed)		.008
	N	33	33
Expenditure on agricultural inputs	Pearson Correlation	.455(**)	1
	Sig. (2-tailed)	.008	
	N	33	33

** Correlation is significant at the 0.01 level (2-tailed).

Table 6.13 Correlation between expenditure on agricultural inputs and maize production

Sources of income were segregated into four categories in the survey, namely income from: 1) livestock and their products 2) the sale of cannabis 3) the sale of other crops and from wages, and 4) pensions, remittances and gifts. The principal sources of cash in the village are wages, pensions, remittances, and gifts, that when they are combined together, make up just over 70% of the total cash income for the households. Income from cannabis is the second most important income category at 27.65% of the total income. Income from livestock and their products only accounts for 2.13% of the total income, while income from other crops is a negligible 0.16%. In correlation tests involving the four income sources and the total income, only the income from work produced a statistically significant correlation, a very strong correlation at 0.957 and significant at the 0.01 level (Table 6.14).

A final correlation that is worth noting, although it is not necessarily very surprising, is that between the size of the household population and the total expenditure of the household. Table 6.15 shows that there is a statistically significant relationship at level 0.05, although the correlation itself, at 0.42, is a relatively weak one.

		Income from work/ pension/ remittances	Total cash income (Botsoapa)
Income from work/ pension/ remittances	Pearson Correlation	1	.957(**)
	Sig. (2-tailed)		.000
	N	33	33
Total cash income (Botsoapa)	Pearson Correlation	.957(**)	1
	Sig. (2-tailed)	.000	
	N	33	33

** Correlation is significant at the 0.01 level (2-tailed).

Table 6.14 Correlation between income from work/pension/remittances and total income (in M)

		Household population	Total expenditure per household
Household population	Pearson Correlation	1	.420(*)
	Sig. (2-tailed)		.015
	N	33	33
Total expenditure per household	Pearson Correlation	.420(*)	1
	Sig. (2-tailed)	.015	
	N	33	33

* Correlation is significant at the 0.05 level (2-tailed).

Table 6.15 Correlation between household population and total expenditure per household

6.3 Assessing the role and importance of cannabis in Botsoapa

In the following section results presented previously in this chapter are analysed. Other data, particularly interviews and informal observations are also drawn upon when analysing the data.

6.3.1 Historical patterns of cannabis production in Botsoapa – comparing the visual record with the oral

There are two primary bases for examining the historical patterns and development of cannabis production in Botsoapa. The first, presented in the opening section (6.1.1) of this chapter, is information on the evolution of cannabis production from small-scale cultivation for ritualistic use to large-scale cultivation for sale as a cash crop from the informants interviewed in Botsoapa. The second is the comparison of an aerial photograph of the village and its environs in 1980 with contemporary satellite images, presented in section 6.2.2. During discussions with informants, particular periods were recalled when cannabis production increased in Botsoapa. The first phase began in the late 1960s and lasted until the mid-1970s, a period that coincides with the attainment of independence from the UK in 1966 and the transition to self-government. A subsequent increase was recollected as occurring in the late 1980s and early 1990s. This period coincided with the large-scale retrenchment of Basotho mineworkers from South Africa. The importance of consulting an empirical source of evidence, in the form of aerial and satellite imagery, is to show whether the second phase of increased cannabis production led to an increase in the total area under cultivation in Botsoapa, or occurred without an observable increase in total cultivated area because of increased productivity from existing fields, or the replacement of food crops by cannabis. If the former is the case then original patterns of food crop production might not have changed drastically with the introduction of large-scale cannabis cultivation. Conversely, if there had been no increase in existing arable land then crop choices would have been affected as decisions were made at household level over whether to plant food crops or a cash crop.

There are four main sources that can lead to increased crop production: an increase in the total area cultivated; an increase of area planted with a particular crop at the expense of other crops; increased productivity; or finally, some combination of these factors. The results from the comparison of the photo and satellite imagery (Fig. 6.5) would seem to point towards a combination of at least two factors. Between 1980 and 2005 there was relatively little increase in the overall area under cultivation in Botsoapa. In fact the increase appears to be only about 1% of total land area. It may be slightly more than this given that the identification of fields was sometimes quite difficult on the older aerial photograph, but not much more. One of the issues to be considered with the increase, however, is that it was concentrated exclusively on the steep slopes above the village. Cleared of protective vegetation and subjected to several ploughings a year, these new fields have a shorter life expectancy than ones sited on less pronounced slopes. Run-off and erosion rates are high and farmers estimated that the productive life expectancy of these fields, especially without the application of artificial fertiliser, was just five or six years. There are few reserves of arable land in the vicinity of Botsoapa, so such farming practices pose a potential risk to future harvests.

A change in crops planted over time is harder to estimate, although given that some households focused exclusively on cannabis production in 2006, then a shift from growing food crops to growing cannabis among some households is likely. During informal discussions, nearly all farmers said that a balance between food and cash crop production was generally sought. The main reason was that an illegal crop could potentially be subject to eradication or confiscation, and therefore depending on cannabis production completely was unwise.

Finally, due to the increased application of artificial fertiliser, an increase in productivity is likely to have occurred. However, visual data do not provide any evidence in this regard, and so this is a matter of speculation.

6.3.2 Crops, income and expenditure in Botsoapa: analysing the results

Results from both of the April and December 2006 crop surveys in Botsoapa highlight the crucial role in agricultural life played by cannabis. In the April 2006 survey, cannabis was accorded an almost identical area of land to the main staple food crop, maize. As noted above, the survey carried out in December 2006 was associated with a period of drought that proceeded to become one of the driest on record in Lesotho (FAO/WFP, 2007). The impact of the drought is evident in the results of the survey. First, the amount of land lying fallow had increased from 2.45 Ha in the first survey in April 2006 to 13.16 Ha in December. Both maize and cannabis seemed to have been impacted in similar ways by this increase in fallow land. The area planted with both was almost exactly halved between the April and December surveys. In contrast, sorghum had actually made a very slight increase between the two surveys. This is not too surprising given that sorghum is a more drought-resistant crop than maize, and that farmers will continue to plant sorghum under drought conditions (FAO/WFP, 2007). It is interesting, however, that farmers treated both maize and cannabis similarly when drought occurred. Maize is widely recognised as a drought-vulnerable crop (FAO/WFP, 2007) and particularly susceptible to the rainfall variability that Lesotho and the region has been experiencing with increased intensity in recent years. Conversely, cannabis is often touted in the literature as a hardy and drought-resistant crop (Leggett, 2006a) that can cope with variable rainfall. According to the survey, however, farmers treat the planting of both crops in a similar manner. Many of the farmers delay the planting of the seeds until they estimate that sufficient rainfall has fallen for the seeds to germinate and grow. Thus the welfare of communities who are dependent on both maize as a food crop and cannabis as a cash crop is vulnerable to a decline of both during abnormally dry seasons.

The two crop surveys also show that the size of field being planted tended not to affect decisions over which crop to plant where. Contrary to the received wisdom often encountered in Lesotho, that cannabis fields tended to be in small plots concealed high in the mountains, in Botsoapa fields as large

as any maize fields were also planted with cannabis. Results from the April 2006 survey display a bias for cannabis to be planted in smaller fields and for maize to be planted in larger fields, but both crops were grown across the range of field sizes.

One of the prevailing concerns in recent years in examinations of agriculture in Lesotho is the supposed increase in the area of land lying fallow, which is usually cited as an effect of an instability to purchase agricultural inputs such as fertiliser (Boehm, 2004). National estimates of the amount of land lying fallow in Lesotho have been put by some authors at around 20% (Marake *et al*, 1998). In the April 2006 crop survey, fallow land accounted for just under 11% of the total land area in Botsoapa, while in the December 2006 survey the figure had risen to 33%, for reasons already mentioned. Of the original 422 fields surveyed that were fallow in April 2006, 9.2% remained fallow in December. If we consider April 2006 as giving a more normal picture of land use in Botsoapa, because of the absence of unusual weather conditions, then it would appear that although quite high, the extent of land lying fallow was still well below national averages. This may, of course, also be typical of the wealthier and more fertile Northern Foothills region in which Botsoapa lies. Lack of resources or crop rotation practices were not the only reasons for land lying fallow in Botsoapa. Disputes over inheritance also caused friction, in which children of a deceased farmer disagreed over who should inherit the fields, with the result that fields were left fallow until the case was adjudicated upon. While the customary law states that the chief shall redistribute any fields left fallow for longer than a period of two years, the headman in Botsoapa acknowledged this was rarely put into practice.

Another persistent criticism of agriculture in Lesotho concerns the mono-cropping of maize and the resulting decline in fertility that such farming leads to (FAO, 2005). Results from the crop surveys suggest that the practice of crop rotation in Botsoapa may be relatively limited (151 fields, or 35.8% of the total area, had the same crop in both surveys). Added to the 9.2% of the fields that were fallow in both the April and December 2006 surveys, almost half of all

fields in the village remained with the same crop or had the same status in both surveys. Although many of the fields had not been planted at the time of the December survey, all indications from discussions with the farmers concerned indicated that most of the fields would eventually be planted with the same crop as present in April. If the same crops are planted continuously on the same fields each year then the natural fertility of the soil will decline. Factors affecting the ability to rotate crops include the visibility of the field from the road the level of exposure or gradient of a field. More exposed fields and those on steeper slopes tended to be planted with cannabis.

Before discussing and comparing the crop yield estimates from the crop and household surveys, one rather glaring inconsistency is worth highlighting. In the first crop survey 422 fields were counted, while the number of fields had increased by 3 to a total of 425 by the time of the second survey in December. A very small minority of the fields were farmed by people who had grown up in Botsoapa and were now living in other areas. These people had inherited rights to fields and continued to farm them, especially for cannabis. In the household survey, however, the total number of fields farmed by all of the households interviewed amounted to 217 fields, representing a shortfall of 208 fields from the 425 recorded during the crop surveys. While several of these fields could be attributed to being held by farmers living outside Botsoapa, current residents of Botsoapa farmed the majority of these fields.

The most plausible reason for the underreporting of the number of fields each household held was that many fields are not official fields and only those fields that are officially registered as belonging to a household were acknowledged. Not every field in Botsoapa has been registered officially as it should be and distributed accordingly by the chief. This is usually because they lie outside the recognised boundary of the chief's authority and therefore on communal rangeland. The chief is, of course, fully aware of their presence but they are not officially registered due to their location. One of the consequences of this is that the chief does not have any official arbitrating power in the event of disputes over these fields. For example, the chief noted that should animals

graze on these fields and destroy their crops he is not able to fine the livestock owners as these fields are outside of his control. The fields that have been created outside the chief's area of control are situated on the higher slopes and on the escarpment above the village, the same fields where the cultivation of cannabis is concentrated. One obvious reason for avoiding registration of the fields could be to protect the owner in the event of police enquiries. While the chief could not officially arbitrate disputes arising in these fields, he was nonetheless frequently asked to intervene on cases such as the destruction of crops by grazing livestock.

Another possible explanation for this underreporting is that respondents may only have declared those fields that supported legal crops, while failing to report fields with cannabis. This explanation does not seem as likely as the first because most of the households disclosed some details of their cannabis harvest during the interviews. Whatever the explanation, it is clear that many if not all of the respondents failed to disclose the number of fields that they were farming.

During the household survey, respondents provided data on crop harvests and food aid for the 2005/06 season, and these can be compared with the yield estimates created for the April 2006 crop survey for the three principal crops, namely cannabis, maize and sorghum. Based on the plant density measurements for cannabis and sample plant weights that were carried out, a yield estimate of 5.2 MT/Ha for whole dried plants was calculated. Whole dried plants have a ratio of approximately 3:1 to saleable product, meaning that the saleable yield per hectare for cannabis is 1.7 MT in Botsoapa. The UNODC have calculated an average yield of 1.16 MT/Ha for saleable cannabis product in South Africa (Leggett, 2006a). Therefore, the yield calculated for Botsoapa is 540 kg more than that of the UNODC estimate for South Africa. According to Leggett (2000b), however, variations can be expected and although the calculated yield for Botsoapa is high, it is not unreasonable.

Using the yield estimates calculated for Botsoapa, the crop survey indicated a maximum potential yield of 79.56 MT of whole dried cannabis, or

26.52 MT of saleable product for the entire village, based on the 15.3 Ha that were devoted to cannabis in April 2006. Respondents to the household survey declared that a total of almost 7 MT (6980 kg) were harvested in the village in the season 2005/06. Therefore, according to the household survey results, only one third of the maximum potential yield was harvested and sold. Two principal reasons are offered as an explanation as to why these figures do not balance. First, the maximum potential yield calculated was just that. Visual observations of all the cannabis fields (see section 6.2.1) showed that some fields in Botsoapa produced less than others, perhaps as a result of soil infertility. Only a selection of cannabis fields could be surveyed, however, in order to calculate productivity. Ideally all cannabis fields should have been measured, but such an approach was not possible given that some farmers were suspicious of how such formal data might be used. The second is failure on the part of the householder to disclose information on cannabis production that might be seen as sensitive. Some of the households interviewed were known, through participant-observation activities, to have been trading more extensively in cannabis than they admitted to in the survey. This again highlights the difficulties of collecting accurate information on extra-legal activites. What can be said after this analysis, with a reasonable level of certainty, is that during the season 2005/06, Botsoapa produced an amount of saleable cannabis that was between 7 MT and 26 MT. Although this is a very large range, it provides an indication of the scale of cannabis production in Botsoapa and its importance in both agricultural and economic terms.

Based on the potential maximum yield of 26 MT from the crop survey and calculating that cannabis was being sold for between M150 to M500 per bag, the income from cannabis for the 2005/06 season could be expected to be within the range of M163,350 to M530,376. As with the much lower yield declared in the household survey, the income from cannabis is also several orders of magnitude less than the expected range (the total income from cannabis declared by the 33 households interviewed was M34,720). As with the total cannabis yield, this is probably an underestimate due to failure to

disclose accurate information, but even taken at its face value it means that cannabis income alone accounts for nearly 28% of the total income for the village. While the category of income from work accounts for 70% of the total income in the village, it is comprised of many different sources, including wages, money from casual labour, pensions, remittances and gifts. Cannabis is therefore one of the most, if not the most, important single source of income for the village collectively. Yet when viewed at the individual level of each household, a very different picture emerges. Survey responses revealed that while some households are almost entirely dependent on cannabis other households receive no income from cannabis at all. While failure to disclose may have resulted in false declarations and led to the appearance that some households receive no income from cannabis, it seems unlikely that a household would declare itself completely dependent on cannabis if it were not. In any case, it is obvious that levels of dependency on income from cannabis vary across the village. This is particularly important in terms of the amount of risk that a household is exposed to when it is dependent on a criminalised crop or, indeed, environmental factors that may enhance or reduce production. From an examination of the survey results it is evident, as might be expected, that those households who are more dependent on cannabis tend to have lower overall incomes, whilst those less dependent on cannabis tend to be the wealthier households, especially those that have access to regular wages or remittances.

The yield estimates for Botsoapa for the principal food crops, maize and sorghum, were calculated during the crop survey, and these can also be compared with figures of harvested amounts that were obtained from the household survey. Understanding food crop production is important in order to address some of the key issues concerning cannabis production, such as whether or not it is interfering in the production of food crops. On the basis of the amount of area under cultivation and average estimates for Berea District, provided by the agricultural statistics, potential yields of 13.01 MT and 2.73 MT for maize and sorghum, respectively, were estimated. Furthermore, taking

estimated nutritional requirements for an adult in Lesotho during the 2006 season (WFP, 2006), amounts of the principal foods could also be estimated. The estimates suggest that 39.72 MT of maize (based on no wheat being grown) and 2.82 MT of sorghum are required locally. Thus, based on estimated yields and nutritional requirements, a shortfall of approximately 26.5 MT of maize was experienced during the 2005-06 agricultural season. Estimated sorghum productivity appeared to be closer to required amounts. The results from the household survey revealed that 7.51 MT of maize was harvested in the 2005-06 season, meaning that only half of the expected maize yield (or one quarter of the amount of maize required for consumption) was harvested. In contrast, according to the household survey, 2.8 MT of sorghum was harvested during the 2005-06 season, which is in line with both the estimated yield and nutritional requirements of Botsoapa's population.

There are three possible reasons why out of the 13.01 MT of maize expected, based on the land area planted in Botsoapa, only 7.51 MT were recorded during the household survey. Like cannabis, one possible reason is that the average yield of 0.8 MT/Ha for Berea District, which was used to calculate the expected yield, was not applicable in Botsoapa. Much of Berea district forms part of the fertile lowlands, where mechanised farming and the use of artificial fertilisers is widespread. Botsoapa, however, lies in the foothills region of the District, where such farming is not practical given the field sizes, slopes and shortages of inputs. Therefore, the overall yield per hectare of Berea District is likely to be higher than for Botsoapa. A second reason arises from discussions during the fieldwork. When households have exhausted their food stocks, maize is eaten green, before it is fully mature. Consequently, households may have no, or only an incomplete, record of how much cereal was actually grown. As the survey asked households to detail the number of bags of cereal collected from the harvest, such figures would not allow for maize collected prior to the main harvest. A third reason that is applicable to both maize and cannabis crops, were the heavy rains experienced late in the

season, and these may have done more damage to crop production than was predicted for the estimated district yields (WFP, 2006).

Food aid and food-for-work programmes made a very important contribution to the food requirements of some households during 2006. The household survey revealed that only four out of 33 households were not receiving some form of food aid, either from family, an NGO, or as part of a food-for-work programme. Households receiving food aid collectively received 6.47 MT of maize[43]. Therefore, the village as a whole received almost as much food aid as maize they produced. Even when coupled with the maize grown, the total amount of maize available in the village in 2006 was approximately 15 MT, just over half the estimated requirement. The estimation may be rather high, however, as the figures used to calculate average food requirements (WFP, 2006) are based upon an average person's daily needs. Children would require less food presumably. Whatever the amount of food required, the shortfall in food staples must be met through purchases, assuming that food is available for purchase at an affordable price.

An examination of the relationship between maize and cannabis production in each household reveals that the two variables are not correlated at a statistically significant level. Figure 6.6 revealed that only in a few households is high maize production associated with high cannabis production. More frequently, households appear to either specialise in maize production or in growing cannabis. For example, households 10, 11, 18, 29 and 31 declared that they only harvested maize, while households 9, 21, 22, 23, 28 and 30 focused exclusively on cannabis. Such patterns of production may also reflect an unwillingness on the part of some farmers to take a risk in growing cannabis.

In the household survey the total expenditure on main staple foods was M32,396. Given that market surveys in Berea District calculated a figure of M6.15 for 2.5 kg of ground maize (WFP, 2006), the expenditure on staple foods by the 33 households could have bought 13.17 MT of ground maize – almost

[43] In some instances, particularly for the food-for-work programmes, rice was the normal food supplied to households but its maize equivalent was counted here.

exactly the shortfall required for Botsoapa. This would appear to verify the figures and calculations for maize collected during the household and crop surveys.

The household survey is also a useful basis for examining the distribution of income in Botsoapa. Lesotho has traditionally had very high levels of inequality in terms of distribution of income, particularly in rural areas (May *et al*, 2002). These levels have continued to rise with the latest Gini coefficient being calculated at 0.63 (UNDP, 2006), one of the highest in the world[44]. Although the relatively small sample size must be borne in mind, calculation of the Gini coefficient for Botsoapa is revealing. Figure 6.7 shows the Lorenz curve as calculated using the cumulative percentages of income and population by household in Botsoapa. Using these figures, the Gini coefficient for income distribution in Botsoapa is 0.32[45]. This figure is much lower than the national average. However, while based on a small sample size, the figure of 0.32 raises questions about whether areas that have cash crops have a more equitable distribution of income.

An examination of the data collected on agricultural production, however, does not paint a picture of great equality between households in terms of their access to resources. The ten households that harvested the largest amounts across each of the four crops (cannabis, maize, sorghum, and beans) attest to a concentration of production among just a few of the households in Botsoapa. The top ten producers of each crop accounted for the following percentages of the total crop harvested: cannabis (74%), maize (69%), sorghum (95%), and beans (83%). Sorghum production is therefore almost completely concentrated in the top ten producing households. Similarly the vast majority of bean production occurs in just over one third of the households in Botsoapa. Maize and cannabis, being the primary crops of choice and the first crops that people

[44] The Gini coefficient is a measure of inequality of income distribution or inequality of wealth distribution. It is defined as a ratio and is calculated by measuring the area under a Lorenz curve of the distribution and the normal distribution line. Therefore a low Gini coefficient indicates more equal income or wealth distribution, while a high Gini coefficient indicates more unequal distribution (Gastwirth, 1972).

[45] This was calculated using an online statistical package (Wessa, 2007).

will choose to plant, are slightly less concentrated and more evenly distributed across the households in Botsoapa, although just under one third of households in Botsoapa produce nearly three-quarters of all cannabis.

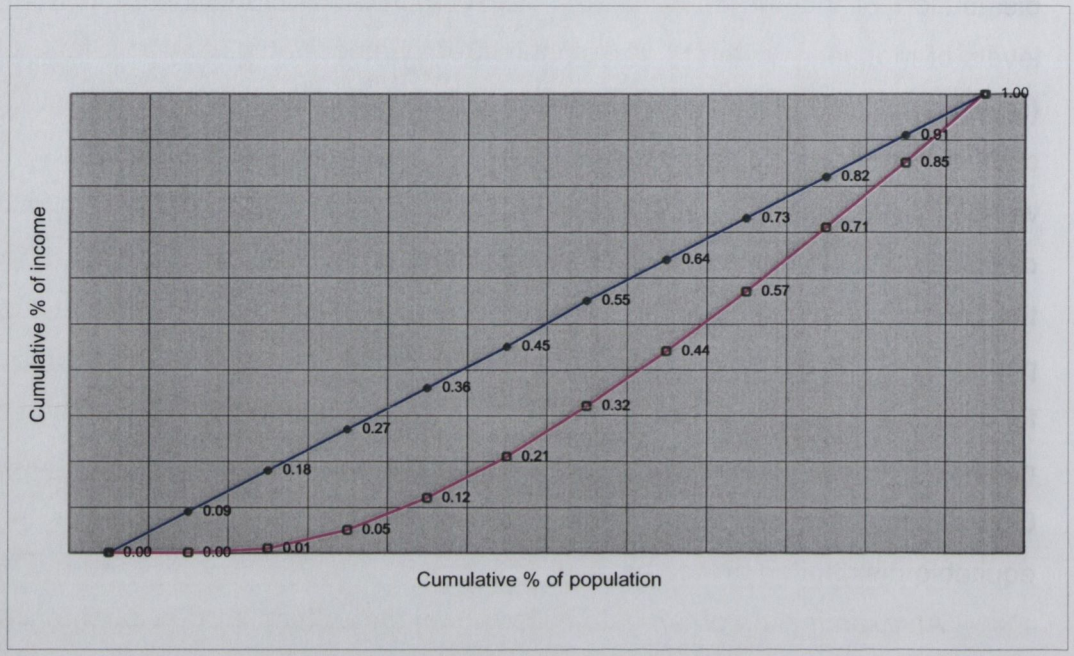


Fig. 6.7 Lorenz Curve for inequality of income distribution

Household expenditure was examined under the following headings in the household survey: main foods, household basics such as soap, agricultural inputs, education costs, medical costs and other miscellaneous costs. Miscellaneous expenditures, which included transport, beer, tobacco and clothing costs, is the largest category, accounting for 35% of all household expenditures. Main foods and basic household items make up 41% of expenditures, and finally medical and school costs and expenditure on agricultural inputs make up 7%, 8% and 9% of the total village expenditure respectively.

The correlation between the amount spent on agricultural inputs and the amount of maize harvested was statistically significant, although the same was not the case for cannabis and agricultural inputs. The principal cost amongst agricultural inputs in Botsoapa is the purchase of artificial fertiliser. Possibly

fertiliser is used less in the cultivation of cannabis when compared with maize, and therefore less inputs are required. During the fieldwork many farmers commented that they were unable to afford the appropriate amount of fertiliser, so even in situations where fertiliser was being used, the quantity applied was insufficient.

Access to basic services such as education and health care was a focus of the research, since the barriers to such services are often income related. With free primary education being introduced in 2000 in Lesotho, education costs are more of an issue with secondary level education, where fees are still payable. Only ten households, however, declared costs associated with education, and of these only four were above M300. For these four households, the costs of education amounted to between 15% and 42% of their total expenditure.

In an interview with a nun who is principal of the local secondary school, the issue of cannabis and the contribution that its income makes to the ability of a household to pay school fees was discussed. Annual secondary school fees are M950 per child. With regard to the relationship between school fees and cannabis income in the area, she noted that when cannabis sales were affected, either by police raids or the lack of South African smugglers arriving to purchase cannabis, then many households were unable to pay school fees. This situation had arisen in 2005 when the Lesotho police and military ran joint operations that involved the raiding of villages in the area for cannabis. If the households cannot make payments, the school tries to make alternative arrangements with the parents, such as replacing school fees with the provision of firewood, maize, or an animal to the school.

In contrast to education costs, expenditure on health was spread more evenly amongst all of the households in Botsoapa, with only four households recording no expenditure in this area. Expenditure on health by households ranged from M10 to M1602 in the village. For 23 of these households, health costs made up less than 10% of their total expenditure. For the remaining six that were above this percentage, there were two cases of health costs being

greater than 50% of total expenditure. As medical costs are more evenly distributed amongst the households, income from cannabis appears more important for accessing medical services than educational services in Botsoapa, simply because of the demographic profile of the population.

A final point to note in relation to cannabis income in Botsoapa is its role in institutionalised saving schemes. The majority of households in Botsoapa contributed to either one or both of two principal savings schemes, namely a burial society and a Christmas saving scheme. From a socio-economic perspective, the importance of burial societies in Lesotho as informal lending and insurance institutions is well-known (Matabo, 1998). Monthly cash contributions are made to burial societies and then payouts are made in the event of the death of a family member to cover the costs of generally expensive funeral arrangements. Only cash contributions are accepted, however, for burial societies, as the money is lodged in a bank account.

Christmas saving schemes function in a similar manner to burial societies, with members of a group making monthly contributions. Christmas is traditionally a time of feasting in Botsoapa, and in the days of the migrant labour system, Christmas would have been the period when mine workers obtained leave to return home. As well as providing a means of saving for such occasions, the scheme also provides an important loan system for members to draw upon in times of need. If they fail to make the repayments to the group then what they owe is subtracted from the payout they would expect to receive. If a member requires a loan they can ask the group and then, if given the loan, they will be expected to pay it back before the end of the year. Prior to Christmas time the money is used to buy basic foods, household items and clothing in bulk at a discounted price and these are then distributed amongst the members. A variation in the cash contribution scheme was taking place in Botsoapa, where two Christmas savings groups were operating. In addition to the monthly cash contribution of M10 or M20, group members also contributed cannabis. The cannabis was held and then sold in November or early

December; a time when the prices were traditionally the highest and the money raised also went towards the purchase of Christmas items.

Cannabis clearly constitutes a very important income for the village, although its importance at the household level is determined primarily by whether it is the main source of income or not. In situations where wage work is generating an income or where households are in receipt of old age pensions, then the income from cannabis is less important than in households where it represents the main source of income. Income from cannabis goes towards the purchasing of basic foods, household items and medical costs in particular. As well as being sold directly for cash, cannabis is also embedded in institutional savings schemes, and used as a substitute instead of cash for the exchange of food and goods.

Chapter 7: Local governance, police and smugglers

This chapter begins with an examination of the two primary institutions of local governance in Botsoapa, namely the chieftainship and local government council, and their role in the extra-legal cannabis economy. An investigation of the varying roles of the police with regard to the cannabis trade follows. The final section of the chapter examines aspects of the trafficking of cannabis across the Lesotho-South Africa border.

7.1 Local governance in Botsoapa

During the fieldwork the issue of local governance was discussed with informants and semi-structured interviews were conducted with both the chiefs and members of the newly elected local government. The new local government authority in Lesotho, established in 2005, is responsible for many of the functions that had previously been performed by the chieftainship, although in its early stages the local government lacked resources and has suffered from a lack of clear objectives (Gay, 2006). During fieldwork in Botsoapa one incident served to highlight a lack of trust among community members due to a poor comprehension of the role of the local government and how they could interact with the local council. The incident concerned the grazing of reserved pasture and resulted in an erosion of trust between the community members and their local councillor, and ultimately a disregard for the local council itself. While the events were not related to the production of cannabis, they serve to demonstrate the social forces that seek to control resource use in Botsoapa, and especially the continued influence of the chieftainship. These are important factors to consider when analysing how the cannabis trade is able to function.

Reserved pasture is rangeland that is set aside for a season to recover from grazing. Neighbouring villages agree on areas that are to be reserved, and once this status comes into effect, livestock can no longer be grazed on the land until the status is lifted. Each village in the area has a grazing committee, consisting of the chief and three other members, which is responsible for matters concerning the rangeland and has a nominee responsible for dealing with offending herd boys and their livestock. If found grazing on the reserved pasture, the livestock may be impounded by the grazing committee and held until the owner pays a fine for the infringement. During the fieldwork the fine was set at M10 per cow. A series of incursions of livestock from other villages onto the reserved pasture surrounding Botsoapa began in early March 2006 and lasted for two months. In some cases up to 30 animals were being seized at a time, resulting in a potential fine of M300, a very hefty sum for most

households. Farmers whose animals were seized became increasingly agitated with the grazing committee members from Botsoapa, often driving their seized livestock off aggressively, without paying the fines. The incursions onto the reserved pasture culminated on 11th April 2006 when over 100 cattle were seized by the grazing committee on the reserved pasture and brought to Botsoapa. Two hours later the owners of the cattle and the herd boys arrived at Botsoapa and after negotiations failed, the owners attempted to drive their cattle home. A violent clash between several men from each village erupted and in order to avoid further trouble the cattle were released.

Normally the chieftainship would have been responsible for dealing with a situation such as the one described, and would have acted before an escalation occurred. When approached by the grazing committee from Botsoapa, however, the ward chief for the area said that responsibility for the resolution of such matters now lay with the local council and members of the grazing committee would have to go to them. The problem was that the local councillor, who represents Botsoapa and the surrounding area, was also an owner of some of the livestock that had been found grazing illegally on the reserved pasture. She failed to bring the issue to the attention of the local council and eventually the grazing committee in Botsoapa had to approach the local council independently. Following an investigation, the local councillor was removed from her position on the council.

This episode serves to highlight the challenges that any new forms of democratic local government have in Lesotho. Quinlan and Wallis (2003) have emphasised the ability of the chieftainship to evolve as the situation requires and believe that chieftainship will remain an important part of daily life in rural areas of Lesotho. Indeed Quinlan (1995:233) identified the chieftainship as "the institutional focus of rural struggles for authority over how external political and economic forces and consequences are assimilated into local society". Central government by comparison is viewed with a combination of expectation and distrust by rural communities, and is not the prime focus of the rural populace (Coplan & Quinlan, 1997). The attitude in Botsoapa was that people were

poorly informed about the role of the new local government council. Therefore, when the council failed in its first test, the community lost respect for the institution and continued to engage with the chieftainship on matters concerning the village. The chieftainship is strengthened by and is, in fact, integral to the functioning of the extra-legal cannabis trade in Botsoapa and its environs, where interaction with Government authorities, in particular the police, is avoided unless absolutely essential. Chiefs, after all, live in the villages and farm the same fields as the rest of the community. Indeed the chief's household in Botsoapa produced the largest volume of cannabis recorded during the household survey. While some members of the local government councils, such as the representative for Botsoapa, also participated in the cultivation of cannabis[46], the council itself could not formally deal with such issues without involving the police. As a result, the chief dealt with any issues in the community arising out of the cannabis trade, such as disputes over fields or payments. In addition, the chief also dealt with many issues that were not related to cannabis but that would normally involve the police, such as cases of domestic violence. The community was fearful of involving the police, as this could have triggered a visit by the police to the village, and if household searches revealed stored cannabis then arrests could follow, or, more likely, bribes would be elicited from offending households. From the observations made during fieldwork, these factors combined appeared to strengthen the involvement of the chieftainship in village affairs. It appears that the need for an authority figure creates a dependency on the chieftainship for matters of governance, as the community are estranged from Government structures by virtue of their involvement in the extra-legal cannabis trade. Lacking trust in institutions, such as the police and the local government council, they turn to the chieftainship for leadership.

As part of the fieldwork, interviews were conducted with two senior chiefs responsible for the area of Kueneng, Mapoteng and Bela-Bela, of which

[46] During a visit to a local councillor's household in a neighbouring village, the author witnessed large of amounts of cannabis growing in the household's compound. This is unusual, as most households tend to plant cannabis in fields that are separated from the household.

Botsoapa is part. While the chiefs said they were in favour of the introduction of the local government, they still wished to maintain control over certain areas, such as land allocation. The principal chief of the area commented, "I don't see the local authorities performing this act [of land allocation]. It's not succeeding. The people in this country still believe in chiefs" (Peete, 2006). Ntate Sekhomo, sub-chief of the area and the principal chief's representative on the local government council, pointed to a number of difficulties raised by the introduction of the councils, including their poorly planned implementation. Sekhomo, referring to the push by the ruling political party[47] to establish local government councils, described his resistance to rushing its implementation:

> "[Although] I am in this office, of the party the LCD, I'm not scared by the political inclinations. I know how we must go on with these people. I'm not ashamed to tell them [the Government] no. This is good for the Basotho, we cannot overrush them, we must talk with them, let them know. Moreover they must know the changes. I think it's alright like that. When you make changes and you impose and you dictate it won't flourish." (Sekhomo, 2006)

One of the difficulties, for example, is that the constituency boundaries of the chieftainship and the local council are not the same. Referring to the dispute over grazing on reserved pasture in Botsoapa discussed previously, Sekhomo (2006) argued that :

> "Now the boundaries of the chiefs and the councillors overlap. If the councillor of this area comes to an area of M..... because the dispute is here, it's within M..... This councillor must come and make arrangements for this dispute with the chief concerned. Although she [the local councillor] belongs to T....., when they come to enter this place they must first consult the chief."[48]

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[47] The ruling political party at the time of the interview was the LCD

[48] "M....." and "T....." are the place names of villages near to Botsoapa, whose names have been withheld to protect the individuals and communities involved.

While Sekhomo supported the local government, he also wanted the chiefs kept in the loop and here he felt that the issue in Botsoapa over illegal grazing on reserved pasture should have involved the chiefs at an earlier stage. During interviews with the chiefs, the local government appeared to be viewed more as a provider of essential infrastructure than the recipient of a handover of political power from the chieftainship. Whilst discussing the reasons for the prevalence of cannabis cultivation in her constituency, for example, the principal chief noted that:

> "People need to live according to human rights' standards. They don't have access to clean water, roads or communication. If we have good local government that understands what it has to do, it can provide these facilities. That's why I'm looking forward to a well-structured local government. Now we don't have that really, maybe after five years, ten years..." (Peete, 2006)

With regard to their own attitudes towards cannabis cultivation, both the principal chief and the sub-chief highlighted the fact that their concern is primarily as representatives of the people, rather than an authority imposing the law of the central government. Both of the chiefs portrayed themselves as intermediaries between the police and the people. The principal chief said that she had shifted from believing that cannabis should be eradicated to actively discouraging police eradication. Similarly, the sub-chief described his actions to limit police efforts against the cannabis trade:

> "The police used to come and ambush the people transporting the dagga. I challenged that though and I wouldn't tolerate that, or they go to the people who are growing it directly but that they cannot stop and make a station here in order to catch the people." (Sekhomo, 2006)

Yet Sekhomo (2006), like many farmers growing cannabis in Botsoapa, began to believe that legalisation of cannabis cultivation would not necessarily be a positive event:

> "In fact, I didn't quite appreciate the situation until later. If we pass a law allowing people to grow *matekoane* then they'll grow it in abundance and the price will go down, so it's better like this [illegal] to keep up the price."

While blaming the South Africa smugglers for bringing in illegal guns, Sekhomo (2006) also recognised that the communities who are dependent on cannabis do not want to involve the police in their affairs:

> "It is true that you could call the police to come to look for firearms but you know that people in the villages, in every house, at least there is around...I would say everybody has a bit of *matekoane*...that's why they don't want the policemen to come."

Sekhomo (2006) readily admitted that the chiefs took a soft stance on issues such as the cannabis trade. When attempting to explain why the chiefs were lenient, he referred to the chiefs' low salaries, in comparison to those of civil servants and politicians, and the chiefs' position as true leaders of the Basotho:

> "Should I say we are lenient...I do not know if I'm putting it right, *morena* [the chiefs] are really sincere people for the Basotho. I would rather even go back to say that if you go into our salaries, these are the lowest paid, the chiefs, simply because they compromise on that they are the leaders of Basotho."

The resistance of the cannabis dependent communities to engage with the Government extends beyond law enforcement to include the provision of basic services and infrastructure. Indeed, while the principal chief recognised the importance of the local government councils in providing infrastructure and services, the communities appeared to appreciate that such development can threaten their primary livelihood. An improved road network is being proposed

for the area and, as Sekhomo (2006) opined, there are both advantages and disadvantages to this kind of infrastructure development:

> "You know *matekoane* is good but it still has a problem...people think that it's not wise having roads because it will bring the police closer to them. But still, alternatively, or I will put it another way, their buyers will reach them easily. What I appreciate is this, it will be alright. Although our people growing *matekoane* will not be happy!"

This clearly demonstrates the difficulties that communities, such as Botsoapa, which will be situated on the proposed new road network, are faced with when engaging with Government development efforts. It would certainly appear that the chieftainship still has a very important role to play, particularly in areas where extra-legal livelihood strategies are employed. In these areas, chiefs form the link between communities who are wary of interacting with the Government and Government institutions that are uncomfortable when dealing with communities dependent on extra-legal activities.

7.2 Police, smugglers and the cannabis trade

Research concerning the LMPS and the cannabis trade followed two principal lines of inquiry during the research. The first line involved contacting the LMPS directly, using official channels to interview police officers about the role and operations of LMPS in enforcing the law that prohibits cannabis cultivation and trade in Lesotho. The second line of inquiry was the evidence gained during the fieldwork in Botsoapa from the experiences of cannabis farmers and smugglers. In addition to these inquiries, a district magistrate was interviewed, and part of the questioning covered the involvement of LMPS in the cannabis trade, in addition to assisting with the verification of evidence collected informally. The subject of LMPS involvement in the cannabis trade was the most difficult aspect of the research project to gather accurate information on. The official LMPS position, as given during formal semi-structured interviews, never revealed the issues that were raised by the farmers

and smugglers, particularly with regard to the payment of bribes and the tacit involvement of LMPS officers in the trade.

As a researcher living in a village dependent on the cannabis trade, contact with local police officers was generally avoided in order to prevent suspicion on the part of the community that the author was an informer to the authorities. Local cannabis smugglers occasionally put such accusations to the author during the early part of the fieldwork and so therefore interaction with the local police was kept to a minimum. Similarly, when contact did occur with the police later in the fieldwork, some officers were often perplexed at the author's motivations for living in a community that was growing cannabis. In an ideal situation, and perhaps given more time, trusting relationships could have been established with local police officers, thereby gathering evidence on the nature of police involvement from their own perspective. Thus while the official police position discussed below provides some useful information, the involvement of the LMPS in the cannabis trade remains largely hidden.

The remainder of this section will discuss findings from the fieldwork concerning the LMPS and the cannabis trade. First, the issues highlighted during the period of participant-observation in Botsoapa, with regard to the villager's interactions with the LMPS will be presented and discussed. Second, an examination of the involvement of the LMPS in the cannabis trade, both in the Botsoapa area and farther afield, will draw on a number of primary and secondary sources to discuss the issue. Third, some of the findings of interviews with both LMPS officers and cannabis smugglers will be presented and discussed.

The police did not visit Botsoapa frequently during the fieldwork. The nearest police station is approximately 15 kilometres away and police travel by foot or on horseback due to the lack of police vehicles. On the several police visits that did occur during the period of fieldwork, only one was a raid that specifically targeted cannabis. Nevertheless, fear of the police amongst cannabis growers was quite high and was a motivation for some, to restrict cannabis cultivation. The level of fear was evident when any strange vehicle

approached Botsoapa. Many of the villagers would lock their houses and hide in the fields until the identities of the visitors had been established. It was for this reason, namely an inability to run and hide when police visited the village, that the elderly and less-able bodied were reluctant to grow cannabis. Another consideration for this category of farmers was that they tended to cultivate fields close to their households, due to the difficulty they sometimes had in walking to distant fields. They were reluctant, however, to plant fields close to the household with cannabis as they could be more easily identified as belonging to the householders. There was also a fear of police violence. An incident that had occurred in 2005, in which a man from a neighbouring village was beaten to death during a joint police and military operation, was often recounted by villagers as a demonstration of the potential violence that could be expected from the authorities[49].

The primary concern of cannabis farmers in Botsoapa is that the police will come to the village, search their houses and then insist on payment of a bribe in order to avoid confiscation of any cannabis discovered. Requested bribes vary in amount and appear to be more related to the apparent wealth of the household than the amount of cannabis found by the police. An example of this that occurred during the fieldwork involved twelve police officers who came to the village during the harvest period shortly after sunrise. Two separate households, among others, were found with harvested cannabis. In the first house the police found three 50 kg bags of cannabis that would have been worth between M1000 and M1500 to the farmer. The police demanded a bribe of M200 and this was given to them. In the second household, five 50 kg bags were found, worth between M1600 and M2500, and yet only M50 was handed over to the police. Neither household had any cannabis confiscated. This particular raid and others carried out in neighbouring villages to Botsoapa were often blamed on those in the community who were informers and who received payment for their efforts. Whether true or not, such accusations contribute to an atmosphere of mistrust in the community.

[49] This incident was apparently the result of a search for firearms rather than cannabis.

During the fieldwork no instances of crop eradication in cannabis fields took place in Botsoapa. Such work requires a lot of manpower as the prime method of eradication, according to the local police commander (Nthimo, 2006), is to pull the plants from the ground by hand before burning them. Besides being an arduous task, crop eradication would also, of course, cut the supply of cannabis. In contrast, by focusing solely on cannabis that has already been harvested, the police can demand bribes while leaving the cannabis with farmers so that they can sell it.

Most police involvement in the cannabis trade occurs with the smugglers rather than with the farmers themselves. As the smugglers operate higher up the value chain, there is more profit to be made from smuggling than there is from cultivation. Yet smugglers are much more comfortable than farmers when dealing with police and a common refrain amongst smugglers was that as long as you had money you could negotiate with the police. Smugglers are also fewer in number and well-known for their activities. The police station is situated on the only road into and out of the area, and so control of the trafficking route was easily established with a semi-permanent manned roadblock in front of the police station. Referring to the area's notoriety for cannabis cultivation and opportunity for financial advancement, one local smuggler commented: "In Lesotho, every policeman wants to work at Mapoteng. They can get very rich here" (Pheko, 2006a).

Accurately establishing the level of involvement of the LMPS in the cannabis trade in Mapoteng proved difficult. Newspaper reports provide evidence of the involvement in cannabis trafficking from Lesotho of SAPS officers in South Africa, yet in Lesotho there was no discussion in the English printed newspaper about the involvement of the LMPS (SAPA, 2007a; 2007b). However, local smugglers in Mapoteng and a district magistrate for Berea District[50] confirmed active police involvement in the trade. Describing the cannabis trade as "the bread and butter" of the people in Berea District, the

[50] The district magistrate did not wish to have a voice recorder used during the interview and also requested anonymity.

magistrate said that police involvement, up to the District Commissioner's office, was central to the sustainability of the cannabis trade locally. The magistrate spoke of cases where evidence, including a seizure of 140 bags (approximately 300 kg) of cannabis, was lost while in the possession of the police, although he noted that few cases involving cannabis actually made it to court, even during and immediately following police operations targeted at cannabis. Interestingly, official police records of all charges made in Mapoteng police station over an 11-month period, between January and November 2006, show only 27 charges[51] for cannabis possession and dealing. Of these, 20 had been brought before and sentenced by the District Court in Teyateyaneng, Berea District. This is a very small number considering that the population in the three constituencies of Mosalemane, Nokong and Bela-Bela that Mapoteng police station is responsible for, is almost 66,000 people (BOS, 2007). This is an area in which Botsoapa and many other cannabis growing villages are situated, and one of the prime cannabis producing areas in the country, according to the LMPS public relations officer (Mphana, 2006). This situation appears to reflect a historically lenient attitude with regard to charging individuals engaged in cannabis production and the presence of corruption. One historian, who researched police statistics for the entire country for one year in the 1960s, commented to the author that no evidence of charges relating to the possession or dealing of cannabis were uncovered during the period considered (Thabane, 2006).

The magistrate indicated that a common scenario was for the police to warn local smugglers of mobile police roadblocks in advance, so that the smugglers could bring money for bribes to ensure their safe passage. Similar procedures occur at the border posts, particularly Peka Bridge and at the Maputsoe/Ficksburg border, the two nearest border crossings to Mapoteng (e.g., SAPA, 2000). Local smugglers confirmed this, noting that they know what shift particular customs officials and police officers work on both the Lesotho and South African sides. They cross the border during those periods when

[51] See Appendix VII.

officers whom they know will accept a bribe are working. One informant who had grown up in the Mapoteng area and had been involved in the cannabis trade during the 1980s said that at that time a commission of approximately 10% of the value of the smuggled contraband was requested by the police for allowing smugglers a safe passage (Moji, 2006). During the fieldwork the importance of mobile phone technology was very clear in terms of facilitating the co-ordination of the cannabis trade. Local smugglers were able to contact their South African counterparts to arrange pick-up and delivery times as well as facilitating communication between the police and smugglers discussed above.

One of the main arguments that is consistently put forward by the media and police in Lesotho when dealing with the issue of cannabis is that the trade in cannabis is also closely linked to other criminal activities, particularly the proliferation of illegal guns, stolen vehicles and livestock theft (e.g., Nyaka, 2004; LENA, 2004a; LENA, 2004b). The public relations officer of the LMPS outlined these links during an interview with the author:

> "The problem that we are facing in this country is that of illegal firearms, they [cannabis smugglers] exchange firearms with dagga with those people in the rural areas. As you know, we also have this problem of stock theft so they will exchange dagga with firearms so that they can protect their stock as they put it, their livestock, this is the problem that we are facing, so we do make such attempts to go and try to eradicate or try to remove those [cannabis] plants." (Mphana, 2006)

The station commander at Mapoteng also viewed the issue of guns, stock theft and the cannabis trade as interlinked:

> Author: You've said already that you see this link between the guns and dagga. Another thing that is talked about is stock theft. Do you think this is part of the same problem?
>
> RN: Ah, no it is not the same problem, but the guns contribute a lot to stock theft because the owners of the animals buy guns from

> South Africans, so that thing is unprocedural because if those people want a lawful firearm they have to apply. Those ones, they are just buying. Even a small herdboy has a firearm. So they even go other places and take all the animals.

Similarly one of the SAPS officers who was interviewed, Superintendent Fischer, believed that there are links between the criminal activities, although he thought that firearms were more tradable than vehicles in Lesotho:

> "Well cars are being used for transport but I don't think they're being exchanged, there is a possibility that firearms are being exchanged for dagga though." (Fischer *et al*, 2006)

In contrast to the view held by the police, the sub-chief, Ntate Sekhomo (2006) was dismissive of the link between the different activities, pointing out that, "You don't need firearms to grow *matekoane*. In fact it's the misuse of firearms that is the problem." He went on to note that stock theft has been a problem throughout the history of Basotho society, for which he held outsiders responsible, referring to the area in the eastern Free State that was annexed by the Boers in the nineteenth century:

> "Lesotho comprised the whole of the Free State...this point of stealing herds of cattle, sheep, or what, it doesn't originate from Lesotho. Basotho know that they have this land that they have been deprived of." (Sekhomo, 2006)

Stock theft was identified by many farmers in Botsoapa as a major problem, and one that has become even more serious over the past ten years. Although a well-documented problem across the country (e.g., Kynoch & Ulicki, 2000; Hennop, 2001; Dzimba & Matooane, 2005), many locals in Botsoapa, and the general Mapoteng area, feel that the increased presence of firearms has led to a reduction in livestock ownership in recent years. According to one informant, a former cannabis farmer, it was the cycle of an increased availability of firearms and escalating stock theft from the 1980s that drew more stringent police attention to Mapoteng. This period also coincided with the establishment

of the military junta in 1986, and an increased focus on fighting crime (Thabane, 2006). During the same interview, Thabane (2006) recalled how the junta was particularly susceptible to any political pressure exerted by the South African apartheid government at this time. Therefore if the South African government wanted a tougher line taken on matters relating to crime, the junta would have responded accordingly.

Examining the validity and extent of claimed links between various criminal activities is important because such claims heavily influence public opinion and national government attitudes towards the cannabis trade. While the smugglers crossing the border with cannabis also undoubtedly function as conduits for other illict goods, as evidenced by the presence of apparently stolen cars, for example, around the village of Ha Mantsi, there is little evidence in Botsoapa village itself of stolen property being exchanged for cannabis, although mobile phones and solar panels to charge batteries and the batteries themselves were encountered, and some of these items may have been stolen before being bartered for cannabis. Local smugglers were more visibly engaged in the transfer of stolen items, with some driving South African-registered cars that they admitted were stolen, and others in possession of firearms. The unwelcome attention that the possession of stolen items attracted, from both the community where the smuggler lived as well as from the police, however, meant that they were generally well concealed.

Income from the cannabis trade being used to fund legitimate enterprises was highly visible, yet receives little public attention. The following is based on informal observations and discussions made during the fieldwork period, primarily in the area of Ha Mantsi, which was a focus of both legal and extra-legal trading in the area. Local smugglers in the vicinity of Ha Mantsi were well-known in the area and it was common to hear the refrain that if one looked for the better built houses, one would find a cannabis smuggler. Many of these local smugglers were also financing and operating legitimate enterprises in Ha Mantsi, such as taxis and shops, which require significant capital investment to start up. In many cases only cannabis smugglers had such capital. Over the

course of the fieldwork the author established a close relationship with one smuggler in particular, Ntate Pheko. Now in his early thirties, Pheko had already spent one year in prison in South Africa, having been caught in possession of large amounts of cannabis in Johannesburg. During discussions, he stressed the increased risk faced by smugglers when venturing into South Africa with cannabis. Since his release from prison, Pheko had vowed only to operate inside Lesotho, where he knew he could deal with the police. Yet by the end of the period of fieldwork, Pheko and his partners were frequently making runs across the border, lured by the more significant profits to be made once in South Africa. As Pheko (2006b) proudly noted when I first met him:

> "*Matekoane* is my work. My wife, my children, my house, it's how I support them. If I need to go to hospital or buy food...I use the money from dagga for everything."

Over the following months Pheko gradually acquired more assets, including a car, and built a small shelter beside his house, where his wife began to sell fruit and fat cakes[52] to the passing school children. He was also able to make house improvements, such as installing a pit latrine (see Plate 7.1), which many households in the area could not afford to do. His ambition was to buy a taxi within the next five years so that he could retire from smuggling and live in less fear on a less risky income. Although just one example, Pheko's case is testament to the fact that people engage in the cannabis trade in order to establish a financial base from which other legitimate and less risky enterprises can be set up and the conditions in which they and their family live improved.

[52] Fat cakes are made by frying maize meal dough in oil.



Plate 7.1: Ntate Pheko (right) installing a pit latrine at his house.

7.3 Crossing the border: cannabis trafficking into South Africa

In order to understand the issues regarding the trafficking of cannabis from Lesotho to South Africa, interviews were carried out with senior police officers from both the Lesotho and the South African sides of the border. Statistics from SAPS on cannabis seizure and drug related offences were examined for the eastern Free State province, which shares a 450 km-long border with the districts of Butha-Buthe, Leribe, Berea, Maseru and Mafeteng in western Lesotho. Much of this section of the South Africa and Lesotho border follows the Mohokare River[53] (see Fig. 7.1). The eastern Free State border is particularly important for this study because of its proximity to the cannabis producing areas in Mapoteng. Further evidence was obtained from secondary sources, including academic journals and newspaper articles.

[53] Also known as the Caledon River.

In contrast to the mountainous and remote border areas in the rest of Lesotho, the western Lesotho border is relatively permeable and has eight official crossing points. Control of the border on the South African side of the border in the Free State is jointly operated by the SAPS and the South African National Defence Force (SANDF), as well as customs and excise officials at the main border posts (Steinberg, 2005a). While SAPS are responsible for the border posts, SANDF has been primarily responsible for the border sections between the eight official crossing points. At the time of writing, however, control was being handed over to SAPS as the SANDF company was redeployed and the local commando unit faced closure[54] (Steinberg, 2005b) in a move to de-militarise policing along the South Africa – Lesotho border.

Most of the cannabis smuggled from Lesotho into South Africa is believed to come through the official border posts rather than elsewhere along the border (Steinberg, 2005b). In 2005 the commander of the SANDF unit responsible for patrolling the border estimated that 600 to 800 kg per year of cannabis is smuggled across the border, primarily by smugglers wading across the Mohokare River with up to 40 kg each who meet with South African smugglers, waiting in a vehicle on the South African side (Steinberg, 2005b). During a three year period, however, between 2002 and 2005, the SANDF unit seized a total of just 60 kg of cannabis (Steinberg, 2005b). These figures are remarkably small when compared with more recent seizure statistics for towns with official border posts.

Statistics were obtained from SAPS for a one year period from April 2005 to March 2006 to examine seizure statistics for eleven towns in the eastern Free State, which are all on or close to the border with Lesotho[55] (Table 7.1). The five towns with the highest seizures are all towns bordering western Lesotho that have border posts in their jurisdiction. What is also immediately apparent is the very high seizure rates at Ficksburg, amounting to 31.65 MT of

[54] Commando units is the popular term for SANDF's Territorial Reserve (Steinberg, 2005b).
[55] See Appendix VIII for original statistics.

cannabis seized over the 12-month period. Significantly, Ficksburg is the nearest border post in South Africa to Mapoteng and Botsoapa.

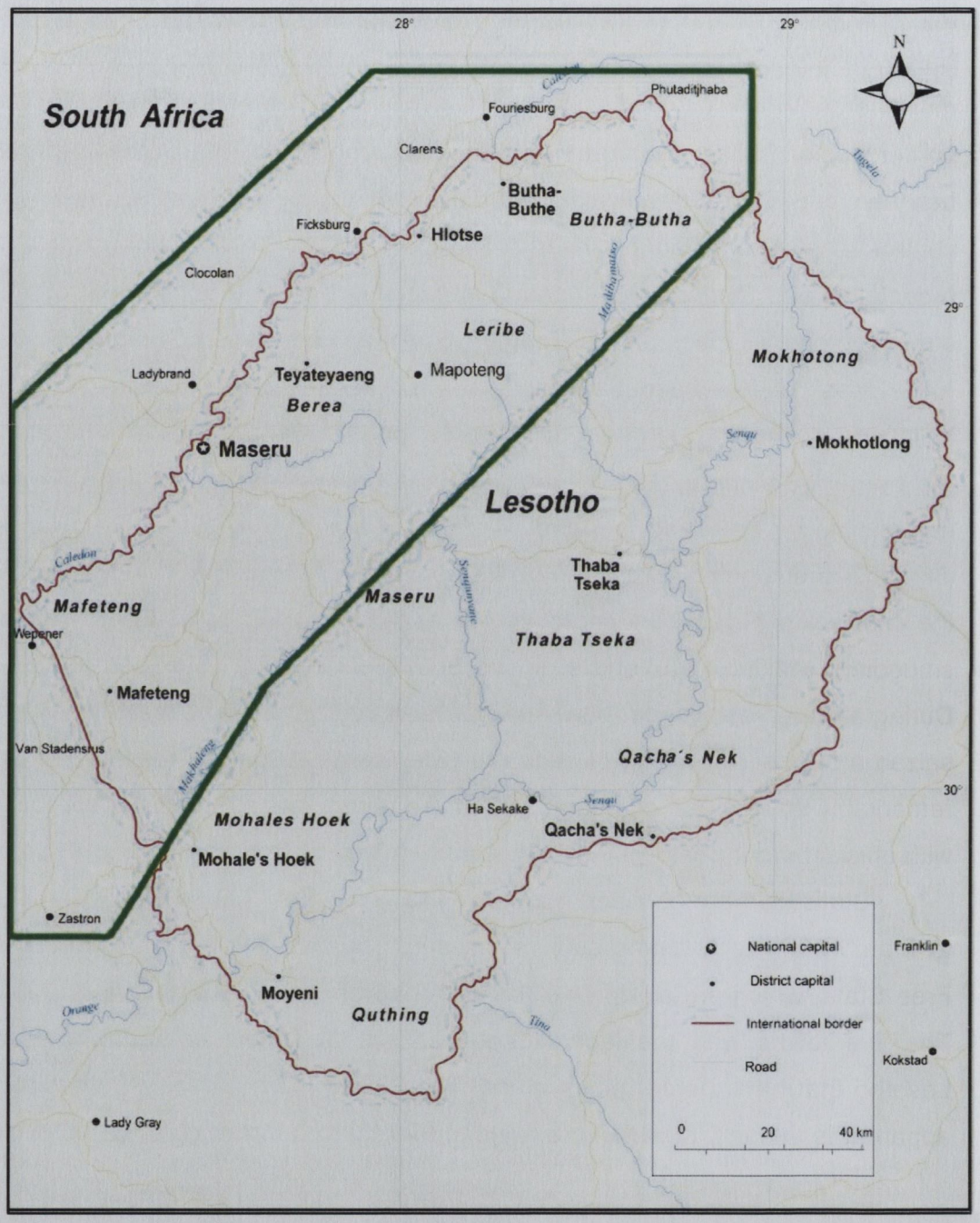


Fig. 7.1: Map of Lesotho, highlighted area marks the borderline between western Lesotho and the eastern Free State province of South Africa

The other border post often mentioned by smugglers in Mapoteng is Peka Bridge, a quiet rural border crossing that falls within the Clocolan SAPS precinct. Clocolan had the fourth highest seizure total of all the towns, recording just over 3 MT of seized cannabis. When data are expressed as percentages (Table 7.1), Ficksburg is shown to account for a large part (58%) of all cannabis seized in the 12-month period. The other towns that figured prominently in the seizure statistics were Ladybrand (Maseru Bridge border post); Fouriesburg (Caledonspoort border post); Clocolan (Peka Bridge); and Clarens (near Caledonspoort).

	Kilogrammes	Percentage %
Van Stadensrus	77.08	0.14
Hobhouse	306.28	0.57
Phutaditjhaba	410.68	0.76
Wepener	611.16	1.14
Zastron	1471.67	2.74
Oewetsdorp	1635.68	3.05
Clarens	2360.47	4.40
Clocolan	3064.41	5.71
Fouriesburg	4143.38	7.72
Ladybrand	7975.87	14.85
Ficksburg	31645.15	58.93
Total	**53701.82**	

Table 7.1 Cannabis seizures (in kilogrammes and by percentage) between April 2005 and March 2006 in the eastern Free State, South Africa. Source: SAPS

When converting cannabis seizures from weight into their monetary value, the SAPS used a value of R1 per gramme. Therefore, with the total cannabis seizure in all eleven towns over the 12 months being 53.7 MT, the amount of cannabis seized was valued at R53.7 million. Of course, such monetary values are based on street prices and the smallest unit of sale. Using these figures would translate into a standard 50 kg maize meal bag of cannabis (containing approximately 20 kg of cannabis) being worth R20,000. As the South African R and the Lesotho M are weighted the same, this represents an increase of between 40 and 113 times what the farmers in Botsoapa receive for a 50 kg maize bag of cannabis. Such pricing also greatly overestimates the value to smugglers at that point in the cannabis commodity chain where the cannabis is seized, as they probably paid only between M2000 to M6000 per bag, based on discussions with smugglers in Lesotho. Figures are difficult to establish, however, and depend on a number of factors, such as whether it is local Basotho smugglers bringing cannabis across or South Africans who have bought cannabis in Lesotho.

	Number of Offences	Percentage %
Van Stadensrus	7	0.91
Hobhouse	13	1.69
Clarens	19	2.47
Clocolan	23	2.99
Zastron	58	7.53
Fouriesburg	73	9.48
Wepener	75	9.74
Ladybrand	128	16.62
Ficksburg	374	48.57

Table 7.2 Drug related crime statistics for eastern Free State (April 2005 - March 2006). Source: SAPS

Drug related crime statistics for nine of the police stations in the eastern Free State were also examined (Table 7.2). These statistics, however, record offences related to all drugs, including charges for possession and use, as well as dealing. Therefore they do not simply reflect charges relating to the trafficking or possession of cannabis but could, for example, include charges relating to the possession of cocaine. A similar pattern to Table 7.1 is evident, however, with the border towns of Ficksburg, Ladybrand, Wepener, Fouriesburg and Zastron being responsible for 92% of drug related offences in the eastern Free State.

	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05
Eastern FS total	4471.84	3134.66	5224.62	4565.24	1907.02	4935.66
Ficksburg	2808.37	1273.45	2827.18	2007.46	1040.05	3965.13

	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06
Eastern FS total	1170.52	3112.77	2305.02	5503.64	5351.56	12019.28
Ficksburg	770.58	1573.24	848.01	2296.05	2450.95	9784.68

Table 7.3 Cannabis seizures (kilogrammes) in eastern Free State and at Ficksburg SAPS station (April 2005 - March 2006) Source: SAPS

Table 7.3 shows the seizure statistics for cannabis in the eastern Free State for each month between April 2005 and March 2006. Seizure totals are relatively small during the winter period (May to October), with fluctuations from month to month showing little discernable pattern. From November 2005, a continual monthly increase in seized amounts of cannabis is evident, with a large amount of cannabis seized in March. This trend is in line with the cannabis agricultural season, with harvesting of the first crop beginning in late November or early December. Data are also provided in Table 7.3 for Ficksburg SAPS station, covering the same 12-month period. There was a relatively steady rate of seizures in the first 11 months, although the figure for

March 2006 shows that a very large seizure or number of seizures were made during this month. Statistical data examined only provided monthly totals of cannabis seizures, so it is not possible at this point to determine how many individual seizure events took place during March, but the total volume seized that month was nearly 10 MT. It is not clear from the data, therefore, whether the large seizure total recorded in March was the result of a small number of large seizures or a large number of small seizures. While the steady increase in seizures from November 2005 again follows a similar pattern to the timing of the first cannabis harvesting of the season, the unusually high seizures in March 2006 compared with previous months indicate something unusual happened. There may, for example, have been a specific police operation during March that aimed to increase cannabis seizures.

The different levels of organisation and volumes of cannabis being smuggled across the border became evident during discussions with local smugglers. In some cases, smugglers were only transporting five or six bags of cannabis, by wading across the Mohokare River into South Africa. Once across the border into South Africa, they would meet smugglers at a designated location, usually in an isolated area, and the South African smugglers would transport the cannabis in a vehicle to the urban areas. Although as Superintendent Botha[56] pointed out, however, there are also cases of smugglers found walking large distances whilst carrying two or three bags of cannabis:

> "I must also tell you that sometimes they [smugglers] carry it as far as Thaba Nchu, as far as Welcom, they carry it for a week...Welcom is about 250km from here, Thaba Nchu is about 70km from here...they carry it through the fields and they usually walk at night and during the day they hide...with regard to whether it is individual-based or syndicates that are involved. I think small portions, small bags, like plastic bags or suitcases, that is more

[56] Superintendent Botha is the operational commander for the South Africa/Lesotho border in the eastern Free State.

the individual but the bigger amounts like the bags, 20 or 30 bags, its more organised then. Actually when we look at drugs that are going as far as the Northern Cape, it's quite organised." (Fischer *et al*, 2006)

Media reports frequently reveal seizures of up to several tonnes in weight in and around the Lesotho and eastern Free State border on the South African side (e.g., SAPA, 2001a; 2005a; 2005b; 2005c; 2006b; 2007c; 2007d; Tau, 2006). Figures for the volume of cannabis seized in Lesotho were presented in Chapter 3 (Fig.3.3) and apart from 2004, when the total amount of cannabis seized jumped to 16 MT, the average amount of cannabis seized annually in Lesotho over the past decade has been in the order of several metric tonnes each year. In 2005, for example, the total amount of cannabis seized in Lesotho was 6.29 MT for the entire country (UNODC, 2007b). Whereas 53.7 MT were seized between April 2005 and March 2006 - a period that overlaps with the data for Lesotho by 9 months in the eastern Free State alone. Similarly from January 2006 until November 2006 in Mapoteng police station, 1.24 MT were seized[57]. In contrast, 14.53 MT were seized in Ficksburg, the nearest South African border post to Mapoteng, in the first three months of 2006.

There are two possibilities as to why seizure statistics are so much higher than in South Africa than in Lesotho. In the case of Ficksburg, either the cannabis is coming from many other regions in Lesotho or South African police are seizing much more cannabis than their Lesotho counterparts. While there are a couple of other well-known cannabis growing areas in their region, Mapoteng is generally regarded to be the primary producing area in western Lesotho. Therefore, it is probably supplying the majority of cannabis that is smuggled over this part of the border to South Africa. This implies that it is differences in levels of police seizures between South Africa and Lesotho that explain the discrepancy between seizure rates in the two countries. This may

[57] See Appendix VII.

be a reflection of the level of police involvement in the cannabis trade in Lesotho or differences in the levels of resources available to tackle cannabis trafficking. Most likely it is a combination of both. On the South African side, sophisticated equipment is being used, such as a mobile x-ray unit as well as vehicle scanning devices at the main border posts of Maseru Bridge and Ficksburg (Fischer *et al*, 2006). However, the border is very long and if police are also working on occasion with the smugglers, then such technology has its limitations.

In fact, police interviews on both sides of the border pointed to differences in terms of the priority that is accorded to the cannabis trade. As the public relations officer for the LMPS pointed out:

> "To be honest with you, priority crimes maybe, if I can put it that way, in this country maybe is that of stock theft, armed robbery, maybe housebreaking and other things. This problem of dagga, I can't say yeah hey, you know, is a big problem. Yes, dagga is prohibited in this country but how can I try to say, the attention that is being given to it is not that much but as you know Lesotho is a very poor country so yes, we can't say that it's a priority." (Mphana, 2006)

Whereas for the senior SAPS officers the cannabis trade is their priority in the eastern Free State:

> "... I think it's [the cannabis trade] one of the most important things...as you rightly have said, from South Africa to Lesotho you're looking at stolen vehicles, firearms, stock theft. Coming from Lesotho I think the main thing from Lesotho is the smuggling of dagga, it is alleged that the dagga coming from Lesotho is some of the best quality in the world ... it's a priority because there's a lot of money involved in dagga, that's also the reason why people as far as from as Namibia and Botswana comes through here, through South Africa to Lesotho to come and buy dagga here." (Superintendent Botha – Fischer *et al*, 2006)

While both police forces agreed that cooperation between the LMPS and SAPS was good with bi-lateral meetings and joint operations being held frequently, a SAPS police officer who was interviewed wondered about where the priorities of their counterparts in Lesotho lay:

> "I don't know what you think but I don't think this [cannabis] is a very big priority for the police on that side?" (Superintendent Botha – Fischer *et al*, 2006)

Both police forces and their jurisdictions experienced the cannabis trade in very different ways and this was evident during the interviews. From the Lesotho perspective the cannabis trade, while bad for the image of the country, was recognised as providing an important income and means to access basic services:

> "... if you take it [cannabis] away completely then what are you going to put in place? You know because there are a lot of people living and depending on it, so yeah, I think that it's a political thing, to some extent, because as you know it's always there and if you go there and visit, if you go there now you will find it there. But hey, our government doesn't encourage people by saying ah, you can do it nicely, no, no, you also have to protect our image internationally." (Mphana, 2006)

In contrast, in the opinion of the SAPS officer other criminal activity was directly associated with the trade in South Africa; in particular the theft of cars to transport cannabis, and this activity effected commercial farmers living along the border with Lesotho:

> "The dagga smuggling also has an influence on the theft of stolen vehicles within South Africa, normally the people smuggling dagga won't use their own vehicles, they will either use a rented vehicles or stolen vehicles ... it's also a problem for the border farmers because they walk over the land with the dagga and if the farmer attempts to report this to us then they used to have some sort of

revenge attacks on the farms or on their way back they will take tractors, batteries or cattle. So it also creates a problem for the farmers because those people aren't scared. They even drive with their vehicles right into the farms to load the dagga." (Superintendent Botha – Fischer *et al*, 2006)

In conclusion, it is clear that the cannabis trade has a different priority for the SAPS in the eastern Free State as oppose to the LMPS. In South Africa, powerful lobby groups such as rural farmer alliances actively campaign for extra security measures along the border (Webb, 2007). In contrast, in Lesotho there is relatively little incentive for the LMPS to be effective in reducing the amount of cannabis smuggled out of South Africa. Apart from reacting with relative speed in cases of suspected illegal firearms, they are under less political or organisational pressure to disrupt the cannabis trade. In fact, according to the informal sources discussed above, the cannabis trade can be quite lucrative for some officers in Lesotho.

7.4 Estimating prices and profits in the cannabis commodity chain

Any estimate of the prices received or paid for cannabis at any point along its commodity chain is, based on the results gathered during the fieldwork, highly speculative. Apart from the prices received by farmers and the prices that a small number of smugglers paid and received for cannabis, the rest of the commodity chain prices quoted in the current research are based on secondary sources, such as police estimates and speculation by smugglers who were interviewed. To try and extrapolate more specific information from the data, such as estimating the exact profit margins made along the commodity chain, particularly on the South African side of the border, would be foolhardy, given the number of unknown variables, such as bribes, discounts for bulk purchases, and payment to smugglers. Nevertheless, a rough estimate of profit margins per unit of cannabis cultivated and sold for cannabis farmers, and the smugglers who buy the crop from them, can be estimated from the findings.

A price range for subsequent transactions along the commodity chain can be estimated from existing police statistics.

The first level in the cannabis commodity chain is the cannabis farmer. Based on the data gathered for Botsoapa, an estimate of the cannabis price range for one hectare can be established[58]:

> 1 Ha produces, on average, 1880 kg of saleable cannabis.
>
> Therefore, a price of between M14,100 and M47,000 is received per hectare.

Given that seeds are normally saved from season to season, the three main input costs to consider are: fertiliser, hiring animals to plough and plant, and the payment of labourers who weed and harvest the crop. The first of these costs is calculated based on the price of fertiliser in Botsoapa and the average application of fertiliser per hectare in Lesotho:

> Fertiliser (@ M125 per 50 kg): an average of 15 kg per hectare[59] = M40 per hectare

The cost of hiring animals was not collected on a per hectare basis and the cost of day labourers in Botsoapa was between M10 and M20. As input costs appear to be relatively low, depending on the resources available to the farmer, cultivating cannabis would appear to have a high margin of profit. An example of one cannabis field from Botsoapa, however, points to lower profits if all of the inputs are calculated.

One cannabis field in Botsoapa was tracked during the entire fieldwork period, including the cost of inputs and the production output from the field[60].

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[58] Based on results presented in Table 6.3

[59] This figure is based on average figures for agricultural inputs in Lesotho (see WRI, 2003)

[60] The field is, in fact, made of up of five fields (field numbers: 407-411) but was treated as one unit by the farmer and therefore is treated the same here.

The results are presented in Table 7.4. The field suffered from water logging shortly after the cannabis shoots emerged and therefore the crop was only one third of what would have been expected for the area covered by the field: before planting the cannabis, the farmer had estimated he would produce approximately 20 bags of cannabis from the field, whereas the final output was just six bags. Despite these loses, the profit was still between 3 and 12 times the input costs, not including the farmer's labour. Cannabis farmers in Botsoapa can clearly make large profits in proportion to the inputs required.

Field area:		3026.62 m²
Inputs:	Fertiliser (15kg)	M40
	Ploughing (animal hire)	M120
	Labour	M100
	Total inputs	M260
Output:	6 x 20 kg saleable cannabis	M900 – M3000

Table 7.4 Input costs and output production from one cannabis field in Botsoapa

The data for profits made during the trafficking of cannabis from Botsoapa to South Africa are much less reliable, given the limited interaction with smugglers in Lesotho and no interaction with South African smugglers during the fieldwork. Police estimates of the street value for cannabis in South Africa provide some opportunity, however, for estimating price ranges along the cannabis chain. After purchasing cannabis from farmers in Botsoapa for between M150 and M500 per bag, smugglers then, according to those interviewed, sell these on for between M1000 and M5000. The price they receive depends on a number of factors, such as the quality of the cannabis and whether or not they had to smuggle it into South Africa, for example. Apart from the cost of transport, the principal cost associated with this section of the

commodity chain is presumably related to the levels of any bribes paid. Not all shipments would require such payments and, indeed, there is the risk that the cannabis could be seized by the police, particularly once in South Africa. If these costs are disregarded, the smugglers at this point are making a profit that is an estimated 10-fold increase on the price paid for the cannabis.

One estimate from SAPS of the street value of cannabis in South Africa is R1000 per kg[61]. This means that a 50 kg maize bag of cannabis, which contains approximately 20 kg of cannabis in weight, is valued at R20,000. It should be noted that police frequently overestimate the street prices for drugs in order, for example, to inflate seizure statistics when given in monetary units. If these values are accepted, however, then large profits continue to be made along the cannabis commodity chain between the various smugglers, dealers and consumers involved in South Africa.

[61] See Appendix VIII.

Chapter 8: Environment, economy and politics

The purpose of this chapter is to address three of the initial research questions posed in Chapter 1 using data gathered during the research study. The first question asked what is the role and importance of cannabis cultivation, as an extra-legal rural livelihood strategy, in the context of contemporary ecological, socio-economic and political factors in Lesotho? The second question focused on the influence of the cannabis trade on income distribution, while the third questioned how the cannabis trade, as an extra-legal livelihood strategy, both incorporates and isolates different political and authoritative entities in Lesotho? Focusing on five issues, this chapter will situate the key findings from the fieldwork in a broader geographical and theoretical context, and provide answers to these research questions. The five key areas discuss the following concerns: environmental degradation, balancing food crop and cash crops, the cannabis economy, local governance, and crime and complicity in the cannabis trade.

8.1 Cannabis and environmental degradation

A recent UN resolution on cannabis in Africa (UNGA, 2004) was discussed in Chapter 3 and attention was drawn to one particular statement included in the resolution. The statement posited that increased cultivation of cannabis in Africa has led to accelerated soil erosion, primarily due to the extensive use of fertilisers, overexploitation of the soil and the destruction of forests as a result of an increase in cannabis fields. While this has been the scenario experienced in some cannabis producing areas of Africa, most notably in the Rif Mountains in Morocco (McNeill, 1992; Moore *et al*, 1998; UNODC, 2007a), there are no studies of sufficient depth or duration to make this continent-wide assumption.

One of the most common environmental impacts associated with the cultivation of drugs is increased deforestation. In Columbia, for example, coca cultivation has been held responsible for an increase in deforestation with consequences for other aspects of biodiversity, such as bird populations (Alvarez, 2003; Fjeldsa *et al*, 2005; Alvarez, 2007). In a study on coca and deforestation in Peru, Young (1996) found that simply calculating the total area of land under coca cultivation was insufficient when determining impacts, due to the fact that the majority of coca production occurs in mountainous areas where the effects of deforestation were already enhanced prior to coca production. Land management practices associated with drug production, however, are heavily influenced by the illegal nature of the activity and the political environment in the area of production. In Columbia, the increase in environmental consequences resulting from land clearance for coca planting has coincided with an escalation in armed conflict (Alvarez, 2007). The unstable political environments in which drug production frequently occurs also prohibit detailed monitoring of environmental resources and even facilitate processes, such as deforestation, by allowing illegal and unrestricted timber logging. While opium cultivation in Afghanistan, for example, may have led to increased deforestation in the 1990s, farmers were also motivated by the high value being received for illegal timber (Saba, 2001). Therefore, poor land

management practices relating to drug production, must be viewed in the context of the often unstable political environments that exist in the same areas.

External actors, who are attempting to reduce drug production, may also exacerbate environmental degradation in drug-producing areas. In Chapter 9, the environmental impacts of chemical eradication will be discussed, but other less intrusive eradication attempts have also been criticised for increasing land degradation. Forsyth (2007), for example, recently noted how opium-substitution programmes in northern Thailand have been criticised for their role in increasing soil erosion. In the 1980s, international development agencies operating in northern Thailand encouraged the replacement of opium with alternative cash-based export crops, such as cabbages, soya beans, and strawberries. However, these crops have been blamed for increasing the exposure of the unstable hill slopes to rainfall, and for providing too little binding of upland soils.

While this project did not employ a specific methodology to examine rates of soil erosion, observation of the study area and evidence gained during informal interviews provides some perspective on the issue of cannabis and soil erosion in Botsoapa. First, issues like the encroachment of cannabis fields onto marginal land and steep, unstable slopes, was the result of an increase in field area rather than a direct result of degradation caused by the planting of cannabis. While a decline in the terms of trade for cannabis may have been partly responsible for an increase in cannabis production, any use of marginal land, regardless of the specific crop, may have caused this situation. Indeed it could be argued that cannabis, by providing increased ground cover in comparison to the dominant food crops found in Lesotho, actually prevents soil erosion due to heavy rainfall. It is worth noting that similar plants to cannabis, such as sunn-hemp (*Crotalaria juncea* L.), have been found to provide excellent ground cover and reduce rates of erosion when combined with careful land management practices (USDA, 1999; Balkcom & Reeves, 2005). While a decline in profits or productivity may have increased the use of marginal land,

cannabis, or legal derivatives such as hemp, could play a potentially useful role in reducing rates of erosion when combined with careful land management.

A more serious aspect of cannabis cultivation in Botsoapa may be the implications of a decline in plant productivity. Anecdotal evidence gathered during the research suggests that declining plant yields and the increased farming of marginal land may be related, with the overall decline in yields from cannabis plants contributing to increased need for the farming of marginal land. Farmers growing cannabis in Botsoapa noted during the fieldwork that a noticeable decline in average plant size had occurred over the previous three decades since cannabis production has expanded. Such a decline in plant size and yield is likely a result of reduced soil fertility. The results from the two crop surveys conducted during the fieldwork demonstrated that practices such as crop rotation were limited, with just over 17% of fields in Botsoapa having their crops rotated with another crop between the two seasons. Monocropping was also common, according to the two surveys, with nearly 36% of all fields having the same crop as recorded during the previous survey. Moreover, the figure could have been higher had the rainfall been less variable in the second survey. If these findings are part of a longer-term trend of limited crop rotation and continual monocropping, then such practices may have contributed to a decline in soil fertility over the years and a corresponding decline in yield.

Relatively little increase in the overall cultivated area in Botsoapa over the past 25 years is evident from a comparison of spatial data, with an increase of just over 1% in total field area during that time. A cause of concern, however, is that the increase occurred on the only land remaining for cultivation, namely the very steep slopes that rise behind the village. These new fields were normally used for cannabis cultivation rather than food crop production. While farmers in Botsoapa recognised that the productive lifetime of these fields is limited, as they are particularly susceptible to erosion, there is no other land available. As cannabis yields decline, larger areas of land need to be planted in order to maintain output. Providing the price of cannabis remains stable, failure

to tackle a decline in output will result in a decline in income from cannabis for the household.

The sustainability of land management and agricultural practices in Lesotho has been the subject of research studies and contentious debate for over seven decades (e.g., Pim, 1935; Showers, 1989; Driver, 1999a; Ramodibedi, 2000; Mbata, 2001; Hassan, 2002; Boehm, 2004; Ranthamane, 2004; Showers, 2005). The monocropping of maize, extensive use of artificial fertilisers, and inappropriate tillage methods were highlighted in Chapter 3 as key concerns that have been identified, as well as policies relating to land management. Apprehension has heightened with regard to the potential impact of climate variability on agriculture in Lesotho (Mendelsohn, 2000; LMS, 2001; Ziervogel & Calder, 2003; Ziervogel, 2004). Erratic climate patterns have resulted in both prolonged droughts and torrential downpours, combined with increased vulnerability due to HIV-AIDS and high unemployment, and have led to increased food deficits over the past ten years (Abbot, 2002; De Waal & Whiteside, 2003; Lambrechts & Barry, 2003). The research and debate has focused, however, only on the impacts on important food crops, particularly maize, in Lesotho and the wider geographical region (e.g., Du Toit *et al*, 2000; *Jones* & Thornton, 2003; Makosholo, 2005). Alternative food crops to maize, particularly sorghum and wheat, may prove more resilient in a situation of increased climate change and rainfall variability. Both sorghum and wheat have been identified as more drought-resistant than maize, but wheat has the added advantage of improving its yield in a CO_2 enriched atmosphere due to the C_3 pathways it employs for carbon fixation (Watson *et al*, 1997; Chipanshi *et al*, 2004). Cannabis is also a C_3 plant and therefore, providing other factors remain constant, would also be expected to have increased yields in a CO_2 enriched environment (Pate, 1994).

Many political ecologists take the view that the promotion of cash crop production, as a result of the spread of international trade, in regions that were previously practicing subsistence-based agriculture, inevitably leads to land degradation (Moseley, 2005). For example, Brottem (2005) believes that the

promotion of cotton production in parts of west Africa will lead to environmental degradation in the region. Arguing against a campaign led by Oxfam and other NGOs, to remove cotton subsidies in the USA, Brottem (2005:2) believes that "to open global markets to west African cash crops will have a far greater long-term impact on the region's landscape". Moseley (2004) has also found evidence to support cotton-induced environmental degradation in Mali, a country that has seen an immense increase in both food and cash crop production since the 1950s. Benjaminsen *et al* (2006), in adopting a critical political ecology approach, however, challenge the simple chain of explanation that is often used in political ecology studies to link global capitalism and environmental degradation. Examining areas of cotton production and other land uses in Mali, their detailed study reveals that investments by farmers, such as in fertiliser and manure, have actually increased soil fertility levels over the past two decades, which contradicts the notion that farming in the region is exhausting soil nutrients. Cotton yields were, however, in decline, but Benjaminsen *et al* (2006) believe that agricultural extensification onto marginal lands is the principal reason for the decline in yield, and that political ecology needs to be more receptive, open-ended and empirically based before reaching conclusions.

8.2 Cannabis versus food crops

> "Africa has remained a major supplier of cannabis to some countries outside the region ... a worrisome new development appears to be the increasing shift from the cultivation of food crops to cannabis in some areas, resulting in food shortages" (INCB, 2004:39)

A common concern encountered in the literature that deals with cannabis in Africa, is that an increase in cannabis production will lead to a decrease in food production as a result of pressure on available land (Cilliers, 2001; Labrousse, 2003; INCB, 2004). Such an occurrence, it is argued, is particularly

harmful when it occurs in subsistence farming communities where a decline in food production may result in poorer nutrition, as alternative food supplies are often too expensive for many households.

Data from the crop surveys carried out in Botsoapa showed cannabis and the dominant food crop, maize, having similar extents. In the April 2006 survey, cannabis accounted for 35.6% of the land planted, while maize accounted for 41.3%. Closer scrutiny of the data showed that although there was variation between households in how much land they allotted to each crop, they generally attempted to strike a balance between the two. During the fieldwork, cannabis farmers who were queried on this issue consistently recognised the importance of growing food crops as well as cannabis, so that in the event of a cannabis harvest being confiscated the household would still have a supply of food. The survey also revealed, however, a large shortfall in overall food supplies for Botsoapa, which suggests that households purchase much of the food they require, and findings from the household survey support this view. So while most households are not food sufficient, they attempt to strike a balance between food and cannabis production, thus minimising the amount of food that will have to be purchased, or to diversify their livelihood to minimise risk.

The introduction of large-scale cash cropping to many regions in Africa occurred during the colonial era, although as Carswell (2003) notes for the Kigezi region of southwestern Uganda, the practice of growing food for cash was prevalent prior to the arrival of the colonial authorities. In fact, Carswell (2003) argues that the trade in cash-earning food crops was so strong and vibrant that it thwarted colonial attempts to introduce export-oriented cash crops, such as coffee, tobacco and flax, in the Kigezi region. Another reason she cites for the failure of export-oriented cash crop promotion in Kigezi, and one that is interesting to consider in the context of Lesotho, is that cash crops were viewed as men's crops: while women bore responsibility for ensuring sufficient food was produced, men were responsible for the cash crops. As

migrant labour opportunities increased, however, men were reluctant to grow cash crops and would rather migrate for wage employment.

The case for promoting export-oriented cash crops in Africa is typically based on their direct potential contribution to agricultural productivity and smallholder incomes. Yet, a relatively neglected area of research concerns the synergistic effects that the production of cash crops may have on other household activities, particularly food production (Govereh & Jayne, 2003). Based on research carried out in Gokwe North District in Zimbabwe, Govereh and Jayne (2003) found that households engaging in cotton production obtained higher grain yields than non-cotton and marginal cotton producers did, although perhaps this was a result of having access to more productive land. Moreover, all farmers benefited from the development of infrastructure that had occurred in the region, as a result of cotton growing, whether they grew cotton or not. The findings from a study examining tobacco and poverty alleviation in Malawi (Masanjala, 2006) indicate, however, that the benefits of income from cash cropping might sometimes be overestimated. Households growing tobacco had a higher income than those households who were not growing cash crops, but due to the seasonality of cash crop incomes, food intake was similar across tobacco growing and non-tobacco growing households. The important factor was not the presence of cash crops but instead the availability of non-farm income.

In Indonesia and Malaysia, two recent studies examined combinations of swidden cultivation and cash crop production for evidence of a mutual buffering effect against each other. The first study examined pepper production and hill rice cultivation near the Sarawak, Malaysia and West Kalimantan, Indonesia border on the island of Borneo. Wadley and Mertz (2005) detected a decline in the strength of the buffering strategy in comparison to previous studies in the area, primarily due to an overall decline in pepper production and the presence of alternative income earning opportunities. The second study, by Sulistyawati *et al* (2005), used a simulation model to study the possible impacts of a substantial involvement in cash cropping in swidden agricultural systems. An

important finding from their study was that it was a less risky strategy to maintain swidden agriculture in a combined farming system, rather than permanently replace swidden cultivation with cash cropping. The principal reason for this, and one that will be examined in more detail below, was an attempt to moderate the impact of commodity price fluctuations.

A final point on the economic benefits from cash crop production is that export-oriented cash crops may indirectly facilitate the further diversification of agriculture. A study in Cameroon (Gockowski & Ndoumbe, 2004) found that the adoption of export-oriented horticultural production indirectly led to increased diversification of agriculture in the south of the country. Two-thirds of the households in the study area were growing cocoa, as well as participating in horticultural production. Noting that horticultural production is better suited to larger land holdings, Gockowski and Ndoumbe (2004) found that the quantity of cocoa production was positively associated with the adoption of intensive horticultural systems.

While valid arguments may be made for the combination of food and cash crop production from an economic viewpoint, one might presume the same could not be said from an environmental perspective. As already noted for cotton farming in Mali (Benjaminsen *et al*, 2006), however, such suppositions should be carefully tested with empirical-based research. On a larger scale, and using Indonesia as an example, Barbier (1989) argued that policies designed to favour food self-sufficiency rather than export-oriented agriculture, may be neither inherently more nor inherently less environmentally sustainable than the other. The main obstacle to sustainable agricultural development was, rather, the failure of economic policy to properly integrate natural resource management.

8.3 The cannabis economy: fluctuation, income distribution, livelihood diversification, and gender issues

The results of this study indicate that cannabis provides almost one-third of the annual income for the village. The importance of cannabis income for

individual households varied greatly. Households that relied heavily on cannabis income tended to be the poorer households, while better off households had a higher proportion of non-farm income, such as remittances or wage labour. Cannabis production can be viewed more as an extension of subsistence agricultural coping strategies for most households, rather than a core economic strategy for households. Even the chief's household, the largest producer of cannabis in Botsoapa, had access to significant other income sources, including remittances from two son's working in South African and a daughter in a textile factory in Maseru. This is a scenario that can be witnessed in many rural communities living in the rural peripheries of southern Africa. In the Richtersveld region of South Africa, for example, Berzbon (2007) examined the household economy of a community dependent on both wage-labour and pastoralism. While stock farming used to be a core livelihood strategy for the community, its role has now shifted to providing insurance against unemployment for those engaged few who are engaged in wage labour and by contributing to a subsistence living. Cannabis in rural Lesotho may be viewed in a similar way. Faced with declining employment opportunities, cannabis has provided a means to achieve some diversification and provide a subsistence living.

During the research, two key issues regarding the market price for cannabis were noted in Botsoapa. The first issue that farmers faced was seasonal fluctuation in the price received for cannabis. The second issue concerned a longer-term decline in cannabis value. As we shall see, these are both issues that have been the focus of much research with regard to the farming of cash crops. Before examining the theoretical debates regarding these issues, let us examine the issues as they effect the farmers in Botsoapa.

Three factors in particular were identified by farmers in Botsoapa as effecting the price received for cannabis. First, police operations, primarily in South Africa, can serve to deter smugglers from crossing the border into South Africa during periods of increased police activity. If smugglers do not arrive to buy cannabis then a surplus of cannabis becomes available and prices fall in

Botsoapa. Whole crops can be lost if confiscated by police, although it is evident that payment of a bribe is often sufficient to retain the cannabis crop during a police raid. Weather is another important variable in determining the output of cannabis in any given season, and poor weather conditions can result in a reduced yield of cannabis and a consequent rise in price as demand exceeds supply.

Second, seasonal fluctuations mean that prices can rise and fall by considerable amounts over the course of several months. During the fieldwork, for example, prices fell during the first cannabis harvest of the season, when supply rose to meet demand. From a high of M500 for a 50 kg maize bag before harvesting began, to a low of M150 per 50 kg bag during harvest time, a large seasonal fluctuation in price was evident. Whether a household made a substantial profit, or whether they merely covered their costs of cultivating the cannabis, was determined by their ability to withhold from selling cannabis during periods of low prices. Most households in Botsoapa, however, declared that they were unable to wait for prices to rise, indicating that cash from cannabis was usually needed urgently for essential items and foodstuffs.

Third, a more abstract concept is the effect that a decline in terms of trade has had on the market price received for cannabis over the past two decades. Like many African economies since the 1980s, Lesotho had experienced a decline in terms of trade, particularly for commodities such as cash crops, although the situation has improved somewhat in recent years (Cashin, 2004; IRIN, 2005). The result for cannabis farmers is that they need to sell increasing volumes of cannabis in order to make the same amount of money. This situation, perhaps more than any other, will drive cannabis production upwards as farmers attempt to maintain a steady income. Such findings are in line with a downward price trend across all illegal drugs in international drug markets (EMCDDA, 2006). In some MDCs, research suggests that cannabis prices have fallen by almost 40% in real terms over the past ten years (Clements, 2004).

As a result of seasonal fluctuations in the price of cannabis, farmers are unable to estimate future incomes with any degree of certainty. Instead, they have to wait until harvest time and base their estimates on current market prices. It is not certain either that prices will rise if cannabis is stored rather than sold off immediately. This means there is little incentive to risk storing cannabis in the household, as not only is there an increased chance of stored cannabis being found by the police, but there is also the possibility that the cannabis could be worth less when the farmer eventually decides to sell. In short, the fluctuating price affects the ability of farmers to plan more than one agricultural season in advance and therefore discourages long-term investments.

The result of the apparent decline in cannabis price in real terms over the past two decades is that, in order to maintain the income generated by cannabis cultivation, farmers have to increase the amount of cannabis cultivated. This is particularly important because it means that households in areas in Lesotho that have witnessed increases in the overall amount of cannabis cultivated in the past two decades, are not necessarily receiving more income. Rather, they are growing increasing amounts of cannabis in an effort to maintain existing income levels, but in the process putting increased pressure on available land.

Seasonal fluctuations of both food and cash crops are particularly problematic in subsistence-based economies. Dostie *et al* (2002) have noted for Madagascar, for example, that seasonal reductions in food consumption, place an extra one million Malagasy below the poverty line during the lean season. While a combination of food and cash crop production should, in theory, provide a buffering effect, with cash being available to purchase food supplies during shortages of food, and food being available for consumption in times of cash scarcity, this is not always the case, since both crops are often harvested at the same time. Masanjala's (2006) recent study in Zimbabwe, mentioned previously, found that non-farm income, rather than income from cash crops, was the most important income source for expenditure and

consumption smoothing, which echoes findings in Botsoapa. Expenditure and consumption smoothing involves the diversification of the household economy, in order that income and expenditure are more evenly distributed throughout the year.

A decline in prices received for cash crops has been played out in many other parts of Africa. In central Kenya, for example, the decline in prices received for tea and coffee has led to lower living standards and higher levels of poverty (Karanja & Nyoro, 2002; Nyaga & Doppler, 2005; 2006). Coffee and cocoa were also the principal cash crops in Côte d'Ivoire, and slumps in prices there have been proven to result in serious negative implications for household welfare (Benjamin & Deaton, 1993).

With reference to the instability of food crop prices in eastern and southern Africa, in particular maize, Jayne *et al* (2006) argue that market instability-related causes of low farm productivity and food insecurity pose a major challenge for agricultural policy in the region. Poulton *et al* (2006) note that while there is broad consensus of the need for increased investment in rural infrastructure in Africa, there is less agreement on what needs to be done to improve the performance of agricultural markets. While they propose a number of steps to dealing with the issue, their conclusion is that until smallholders achieve a greater political voice, agricultural market development will not improve greatly.

Coffee was mentioned previously as a cash crop that experiences high levels of price fluctuation and this has affected many smallholder households reliant on income from it in different parts of the world. Eakin *et al* (2006) studied the impact that the post-1989 coffee price decline had on smallholders' livelihoods in coffee producing areas of Mexico, Guatemala, and Honduras. While the study confirmed that effects were severe for coffee producing households, a crucial factor in determining levels of impact was the presence or absence of local networks between farmers and information services. Where such networks existed, farmers were given better warning about the likely impacts and could try and prepare accordingly. In a similar study conducted

amongst coffee growers in Vietnam, Ha and Shively (2007) noted that whereas larger coffee-producing farms had the resources to change crops when coffee prices declined, smaller farms appeared to be more restricted in their options. Ha and Shively (2007) concluded that the promotion of cash crops amongst smallholders, with limited land resources, was unlikely to be as economically beneficial as other means of increasing livelihood diversification in rural Vietnam.

A key factor with coffee is that the liberalisation of coffee markets has increased the direct exposure of producers to price risk (Mohan, 2007). While international trading agreements and policies are often blamed for this, Rapsomanikis and Sarris (2005) note that their findings from Ghana, Vietnam, and Peru indicate that domestic factors are largely responsible for income variability in cash crop dependent households. Petit (2007) puts forward a series of suggestions to tackle the issues facing the 15 million coffee producers in Ethiopia. Among the recommendations he makes is a focus on quality rather than quantity, and the important role that cooperatives may be able to play in raising the prices received by farmers. All of these sensible strategies are, unfortunately, impractical for cannabis farmers in Lesotho, dependent as they are on a criminalised crop. They do highlight, however, the fact that many of the cash crops produced in LDCs face similar difficulties, to those experienced in Botsoapa.

While development economists have viewed increased trade as the traditional panacea for reducing poverty (Winters, 2000; 2002), the level of benefit that African smallholders would derive from trade increases, especially based on export-oriented crops, remains unclear. A recent study examining this issue in Tanzania (Duygan & Bump, 2007) found that the occurrence of poverty and the distribution of cash-crop production were positively related. Duygan and Bump (2007) argue that agricultural export-led growth will do nothing for poverty reduction if it fails to address the geography of poverty, or to involve the labour or products of poor people. Another study by Diao and Dorosh (2007) examined this issue across seven countries in eastern and

southern Africa, and also found that a focus on export crops has limited potential for raising household incomes. Rather, the best prospects for agricultural-led growth remain in supplying the regional food sector.

Income distribution and livelihood diversification

Traditionally, the distribution of wealth in Lesotho has been very uneven between households, particularly in the rural areas (May *et al*, 2002). With a recent estimation for a Gini coefficient of 63.2 (UNDP, 2006), Lesotho continues to maintain one of the highest levels of inequality in the distribution of income in the world. In the past, such inequality has been blamed on accumulation and dispersal of assets of households participating in the migrant labour system, where income and assets were accumulated during the years of migrant labour employment, and then dispersed once the migrant returned home and retired (Spiegel, 1980; Murray, 1981). One of the aims of this research study was to examine levels of equality and inequality, with regard to the distribution of income and resources, in a community that was engaged in cannabis production.

Results from the household survey showed that, to some extent, Botsoapa experienced a more equitable distribution of key resources, such as land, than other villages in Lesotho. Only two households (6%), for example, had no fields in Botsoapa, compared with an average figure of 28% for the Northern Foothills region and 41% for the entire country (Gay & Hall, 2000). The distribution of land is, of course, key in an economy based on subsistence agriculture and a figure of 6% in Botsoapa indicated a much more equitable distribution of resources than in other areas in the country (Gay & Hall, 2000). Part of this more equitable distribution of land may, in fact, have more to do with the working of land outside the official area of administration of the village head, rather than a fairer system of distribution. The fields comprising this land are not registered officially and declared to the local government, and appear to have been brought into cultivation in order to maintain or increase levels of cannabis production. Therefore, cannabis appears to have driven a more

equitable distribution of land. A five-country study in eastern and southern Africa found similar statistics for levels of landlessness, as found in Lesotho, with roughly a quarter of the agricultural households in each country being virtually landless (Jayne *et al*, 2003). Another factor to bear in mind is that whilst distribution may be more equitable, an increase in population could lead to an increase in pressure on the very limited land available. In other environments where similar situations have occurred, such as on the slopes of Mount Kilimanjaro, a major decline in the size of farms occurred, with serious implications for livelihood strategies (Soini, 2005).

A Gini coefficient of 0.32 was calculated for Botsoapa. In contrast to the national figure of 0.63 then, incomes in Botsoapa are considerably more equitable than the average national figure would suggest. When the agricultural data from the household survey was examined, however, most of the production of both cannabis and food crops was seen to be concentrated among a small number of the households in Botsoapa. In the case of cannabis, the 10 most productive households were responsible for 74% of the total cannabis production in the village. Yet the important factor was not simply how much cannabis a household was producing, but rather how much the income from the cannabis contributed to the household's total annual income. It was the households that were completely dependent on cannabis income that were the poorest and most vulnerable in the village. These also tended to be the smaller producers. So while statistical analysis of the data points towards a relatively equitable distribution of wealth in the village, at least by national standards, the production of and income from cannabis is by no means spread evenly amongst the households, although having land at least offers the opportunity to engage in growing cannabis.

Cannabis cultivation on a commercial scale in Botsoapa can be viewed as a response to converging marginalisations in the ecological, economic, social and political spheres over the last three or four decades. Key issues, which were addressed in Chapter 3, include the pressure on agricultural land in Lesotho, the impact of the migrant labour system on social life, as well as the

economic impact resulting from its collapse, and political instability in Lesotho. Along with more recent developments, such as the increase in levels of HIV-AIDS infection and climate change, rural communities like Botsoapa are experiencing declining employment opportunities and increasingly difficult conditions to practice subsistence farming with any success (Gay & Hall, 2000; Turner, 2001). Success of subsistence farming, of course, has in the past been dependent on remittances and cash inputs to support the input costs of agricultural production. Faced with these challenges, cannabis cultivation has offered the opportunity of generating an income from the resources available to almost every household in Botsoapa, namely land. While cannabis is not the only source of income for most households in Botsoapa, it is perhaps more reliable than the prospect of wage work, for example, given current economic conditions. However, just as Well (1980) noted three decades ago, with regard to a coca growing community in the Bolivian Andes, the future of the cannabis trade in Lesotho is largely beyond the control of the farmers.

Like the farmers in Botsoapa, many smallholders in Papua New Guinea also combine food crop production with cash crops, including cannabis (Halvaksz, 2007). When Brookfield and Hart (1971) conducted fieldwork in Papua New Guinea in the late 1960s, they were very surprised by the order of magnitude of differences in incomes from village cash cropping in different parts of the country. They concluded that environmental constraints were primarily responsible. A more recent study by Allen *et al* (2005), examining the same issue, agreed that environmental constraints remained primarily responsible for spatial inequalities. The result in Papua New Guinea has been a massive migration of rural dwellers to other more accessible rural areas, or to peri-urban areas. A similar situation occurs in Lesotho, where mountainous terrain makes the provision of much rural infrastructure an expensive task. More recent studies from Papua New Guinea point out how economic diversification can lead to new opportunities for farmers of one of the principal cash crops, palm oil, and that the crop can be harvested in a sustainable manner whilst

facilitating rural development (Koczberski & Curry, 2005; Curry & Koczberski, 2007).

While the rhetoric of livelihood diversification may abound, it is often less easy for the poorest households, to find other livelihood opportunities. In a study of a smallholder community on the edge of the Kalahari, Twyman *et al* (2004) noted that the poorest households had the most limited asset bases. Diversifying the household economy was possible for the wealthier households who could mobilise and productively use their assets to generate positive livelihood outcomes. In contrast, poorer households lacked the ability to diversify in the same manner. The poorer households typically depended on cash income for subsistence, as they did not have the agricultural assets accumulated by the wealthier households. Twyman *et al* (2004) concluded that it was not wealth or poverty so much as an ability to mobilise assets that determined access to other livelihood strategies. A very similar situation was evident in Botsoapa, where the poorest households were dependent on the meagre cash income from casual work, such as weeding. They lacked assets, such as livestock, and productivity was limited by the cost of agricultural inputs.

While international market forces and domestic policies dominate much of the analysis regarding smallholder welfare, Beckford and Barker (2007) warn that the capacity of local knowledge to cope with adaptation and change should not be forgotten. Using a case study of smallholder producers in Jamaica, they note that "local solutions based on traditional knowledge and wisdom, and farm level experimentations, are a *sine qua non* in the ability of these farmers to continue to survive". This is a point that is well worth remembering when discussing the prospects of smallholder agriculture in any part of the world.

Gender and cannabis

Lesotho's involvement as a labour reserve colony in the migrant labour system, and the impact that this system had on women who remained in the rural areas, has been the subject of detailed research, especially between the 1970s and mid-1990s, as noted in Chapter 3 (e.g., Gay, 1980; Spiegel, 1980;

Murray, 1981; Eldredge, 1991; ISAS, 1993; Langston, 1993; Epprecht, 1995). The role of women in agriculture became so prominent that it has been said that the regions supplying migrant labour experienced a feminisation of agriculture (Ellis, 2000). There has been considerable debate, however, as to the advantages and disadvantages of the burden that was placed on women to both farm the land and raise children. Gordon (1981), for example, believed that the experience was one that limited women and increased their burden.

The socio-economic landscape in Lesotho has changed enormously over the past two decades with the large-scale retrenchment of migrant labourers back to Lesotho. Rural villages, such as Botsoapa, no longer have the majority of their male population going to work in South Africa. While some young men still venture across the border in search of work, they can usually only obtain work when the absence of valid permits is overlooked, as working permits are difficult to obtain. A more common occurrence is for young women to go to the urban centres in Lesotho, particularly Maseru, to seek work in the textile factories. Low average incomes in the factories and a relatively high cost of living in Maseru, however, means that remittances to home villages are often very small, if they are received at all (Boehm, 2004). More men are engaging in agricultural production in recent years, but some tasks are still regarded as the responsibility of women, particularly weeding (Boehm, 2004).

Given these historical aspects of agricultural production in Lesotho and the recent socio-economic changes that have occurred, attention was paid during the research to gender issues relating to the cultivation of cannabis and the control of income[62]. The cultivation of cannabis did not appear very different from other crops, in terms of the gendered division of labour. Like other crops, men were responsible for the preparation of the land, particularly when cattle were required to pull the plough and the planter. From informal observations, women tended to be more involved in weeding and harvesting, even in cases where cash payments were being offered for these activities.

[62] A limitation to this aspect of the research was that due to both the author and research assistant being male, it was not always very easy to investigate matters concerning women's perspectives of men.

However, particular members of a household appeared to take responsibility for their own plot of cannabis. There was a case, for example, of a 16-year-old boy who, from the holdings of the household, was given a plot to grow cannabis with his brothers in order to make money for school expenses. Generally, however, the gendered division of labour in the cultivation of cannabis tended to mirror that of other crops.

Outputs from the cultivation of cannabis and food crops differ, however, with the latter providing food for the household and the former providing income. While relatively little dispute may occur over the allocation of resources yielded by the cultivation of food crops, controlling incomes to the household equates with having influence over household decision-making. Of course, disputes over the control of income vary in different households. However, according to observations made during the research, many men still wish to be in control of household income. During the era of migrant labour, households growing cannabis would have had two sources of income, one from the mines and a second from the sale of cannabis, with women commonly controlling the income from cannabis, because the latter could be concealed from absent husbands. With the presence of the men in the villages now, however, such evasion is much harder to achieve. Although it is only possible to speculate on the effects of a greater involvement by males in the control of household income, they may include a decline in the effective planning and management of a household budget, as in Lesotho, as with other LDCs, women are often the ones responsible for the purchases of household items and other costs associated with the household and children.

Three recent studies relating to gender and cash crops provide important points to consider when reflecting on cases such as Botsoapa. Jackson (2007) notes that women have traditionally been regarded as risk-averse food producers. However, evidence from Zimbabwe and Zambia points to the fact that risk behaviours associated with food production are related to the character of marriage and forms of conjugality. Marriage, Jackson (2007) argues, can work as a form of insurance, usually for women, but it may also become an

impediment to the accumulation of capital. In the context of a changing gendered division of labour in Lesotho and an apparent decline in women establishing marital relationships (Akinboade, 2005), this point raises new questions to consider about production strategies in women-headed households. Returning to Papua New Guinea, a recent study by Koczberski (2007) highlights a payment scheme for women engaged in oil palm production, whereby they are paid separately from their husbands for output from their family plot. While such an approach might have been lauded as admirable in the past, O'Laughlin (2007) has cautioned against accepting that redressing a gender imbalance over control of productive resources will significantly reduce poverty, and instead argued that it will simply divide further what is an already insufficient income stream.

8.4 Local governance and extra-legal livelihood strategies

Findings from the fieldwork suggest that the chieftainship, as the traditional form of local governance, has been strengthened rather than weakened by its engagement in the extra-legal cannabis economy. This is most likely as a direct result of the disengagement of cannabis growing areas with central government and its representative authorities, such as the police and, more recently, local government councils. Fearful of the power of these authorities to restrict the cannabis trade, the community in Botsoapa has looked inward during times of conflict, using the chieftainship structures to assist in arbitrating on disagreements. Some of the conflicts observed during the fieldwork were serious issues, involving cases of domestic abuse as well as violent outbreaks resulting from disagreements over reserved pasture. In a normal situation, these issues would have involved the police, but as a result of the cannabis trade, people in Botsoapa were afraid of police involvement in village affairs and turned to the chieftainship for support. The *pitso*, or community meeting, was one of the key mechanisms used to discuss and reach agreement over how disputes should be dealt with. At these meetings, the community openly debated the risks of involving Government authorities in

disputes and made decisions based on the majority viewpoint. Therefore, while engagement in the cannabis trade has, to some extent, distanced the community from local and central government, it has also enabled the community to retain mechanisms, such as the *pitso*, as an effective decision-making process.

The chieftainship has at least three factors in its favour in comparison to the local government council. First, the chiefs live in the communities they are working with and they too depend on income from the cannabis trade. Indeed in Botsoapa, the village headman was the largest producer of cannabis in the village. While members of the local council were also engaged in the cannabis trade, they are under more pressure to observe the authority of central government when they are acting in their official capacity. In contrast, the chiefs are primarily answerable to the hierarchy in the chieftainship. In the case of Botsoapa and Mapoteng, this hierarchy was found to be at least neutral to, if not outright supportive of, the cannabis trade. Second, a chief's power base is the community that they serve rather than central government. While the local council is viewed suspiciously as an extension of central government, people believe that they have less to fear from the chieftainship. Evidence from Botsoapa clearly supports Quinlan's (1995) assertion that the chieftainship is the institutional focus of rural struggles over how external policy and economic forces are assimilated into local society. Third, there is no requirement of a chief to intervene, officially, in a dispute in their area. For example, the village headman in Botsoapa was fully aware of, indeed participated in, the establishment of unregistered fields on marginal land and steep slopes. Although these fields were beyond his area of administration, he was still able to engage in matters of arbitration unofficially, a position that the local council would not have been able to take on easily, due to their physical distance from the community and accountability to central government.

Aside from questions surrounding the relevance of a hereditary governance structure in a democratic society, one potential negative consequence of a chief's involvement in local governance is that unpopular

decisions may be avoided. Given that the chiefs' mandate comes from the community, then they may be unwilling or unable to make unpopular decisions relating to long-term issues. Fokwang (2005) disputes this, however, and believes that chiefs have an integral role to play in the socio-economic and political development of communities in Africa. Morapedi (2005) adopts a similar position in his examination of the chieftainship structure in Botswana.

Based on the findings from Botsoapa, four challenges in particular appear to face the local government, as they attempt to win over the community and implement their mandate as democratically elected representatives throughout Lesotho. First, the fact that chiefs live within the communities they are serving leads to them being the natural first point of contact for many villagers with grievances. Physical proximity becomes all the more important when an extra-legal livelihood strategy, such as cannabis, is concerned. Through their knowledge and engagement in the cannabis trade, chiefs represent less of a threat than the local government. Second, local government is viewed as an extension of central government authority, which can be unwelcome in an area dependent on an extra-legal livelihood strategy. Third, a shortage of resources has meant that the local council has struggled to fulfil its mandate. Fourth, the local council is constrained by having to conform to central government rule and law in contrast to the chieftainship, which is able to maintain a flexible position on matters, such as the cannabis trade. While the chieftainship is supposed to operate within the law, like any citizen of Lesotho, the reality is that chiefs are able to be more flexible than Government representatives in their attitudes, particularly if senior chiefs are behaving accordingly.

The result of the contestations for power over local governance is that the people will chose the chieftainship as a known, although not necessarily trusted, entity. In contrast, the local government council, as a political entity, is perceived as being removed from the realities of what engagement in the cannabis trade entails. It is viewed with suspicion and regarded as an agent of central government. One important issue that these findings raise is that if any

strategy is to be negotiated between central government and cannabis producing communities for the future of cannabis production, then the chieftainship will play a key role in facilitating such negotiations. If the chieftainship was sidelined, then interaction with the community would be particularly difficult, with high levels of distrust and suspicion existing on both sides. Another key issue concerns whether a local government council will ever be able to govern in an area dependent on an extra-legal livelihood strategy, unless they too engage in the trade. Finally, the presence of the cannabis trade appears to have strengthened local decision-making and traditional forms of governance in favour of those put forward by Government. Undoubtedly there are valuable lessons to be learned from the experiences of communities, such as Botsoapa, that have had to deal with local governance issues from within rather than expecting the support of Government. Apart from the negative aspects of being disassociated from central Government, it is also encouraging to witness communities taking some responsibility for their own governance.

One hypothesis put forward as to why the chieftainship retains the support of rural people in Lesotho is that they uphold Basotho customs and traditions (Pherudi, 2001). As was noted in Chapter 3, however, Quinlan and Wallis (2003) warn against underestimating the ability of the chieftainship in Lesotho to evolve as the political situation requires. More recently Burr and Kyed (2006) made similar observations in Mozambique, and they warn against viewing the chieftainship as a purely traditional structure, or indeed as an inherently genuine form of African authority.

8.5 Crime and complicity

Laniel's (1998) observation that the cannabis trade in Lesotho enjoyed de-facto decriminalisation is supported by the research findings from this study. The cannabis trade functions, however, as much as a consequence of extra-legal participation in the trade by the authorities in Lesotho than as the result of any official leniency displayed towards cannabis. The significance of this finding is that cannabis probably only enjoys such decriminalisation as long as

authorities can profit from the trade. Any serious attempt, for example, to investigate and curtail the practice of corruption amongst the authorities involved, particularly the LMPS, would likely have a negative effect on the ability of farmers and smugglers to conduct effectively the cannabis trade in Lesotho. Both cannabis farmers and smugglers would feel the impact alike if the police and judicial system properly applied penalties, such as fines and the confiscation of cannabis.

Results from the current research indicate that seizures of cannabis and charges relating to the cultivation and trade in cannabis were consistently lower in Lesotho than those of neighbouring South Africa. The conclusion from these findings is that different attitudes prevail amongst the police forces in the two countries with regard to the enforcement of legislation that prohibits the cultivation and sale of cannabis. Police interviewed in Lesotho readily admitted that cannabis was not a priority for the LMPS, citing a lack of resources as the main reason why more serious crimes had to be prioritised over cannabis. Yet for the police in the neighbouring South African province of the Free State, the cannabis trade was identified as their top priority, particularly in the eastern Free State, where the province borders Lesotho. This is not to say, however, that some SAPS officers are not engaged in facilitating and profiteering from the cannabis trade. A recent report by Faull (2007) on corruption in the SAPS reveals that measures to reduce corruption have been largely unsuccessful to-date, although new initiatives to tackle corruption are planned. Transparency International publishes an annual global corruption barometer, based on citizen perceptions of corruption. Outside of Africa, politicians are consistently ranked as the most corrupt state actors, yet within Africa, it is always police (Transparency International, 2005). South Africa is unique, with both police and politicians ranked first, implying a network of political-criminal corruption.

Differing perspectives on the cannabis trade between the LMPS and SAPS partly reflects the political pressures placed on these police forces. One of the chiefs in Lesotho who was interviewed during the research readily admitted to asking the police force to be lenient on cannabis farmers in the

Mapoteng area. If such requests were heeded by the LMPS then this would demonstrate the power that the chieftainship can exert over policing of the cannabis trade. Similarly, there is little incentive for politicians in rural Lesotho to demand a harsher approach to dealing with the cultivation of and trade in cannabis. With large sections of the rural population dependent on income from cannabis, such a stance could well lead to voters turning against politicians who advocate a more severe treatment of those caught breaking the law.

In contrast to Lesotho, there is significant political pressure in South Africa from those affected by the negative impacts of the cannabis trade. Crime in South Africa is a very important political issue and drug trafficking is no exception (Faull, 2007). Urban populations in South Africa demand police action to reduce activities relating to the cannabis trade, including car theft and gun crime. In rural areas, such as along the eastern Free State borderline, farmers constitute an important lobbying group with a powerful influence in the province and at national level. As noted in Chapter 7, these farmers experience negative impacts of cannabis smugglers crossing their farmland, including the destruction of fences, theft of property, and even direct intimidation if they report the smugglers to police. Lobbying by agricultural groups has undoubtedly ensured that the policing of the borderline remains a priority for the Government and its security forces.

The different perspectives shown towards the policing of the cannabis trade in Lesotho and South Africa by the LMPS and SAPS clearly demonstrates the impact of the trade at different points along the cannabis commodity chain. In Lesotho, the police are fully aware how cannabis supports rural livelihoods by providing an income for cannabis producing communities. Although there are associations made between cannabis and other criminal activities, such as stock theft and gun running, in general the impact from the cannabis trade on crime in Lesotho appears to be relatively minor. Conversely, South Africa is the final destination for much of the cannabis cultivated in Lesotho and the country experiences increased criminal activity as a result of the cannabis trade in part,

no doubt, because of the far higher value of cannabis towards the upper extreme of its commodity chain. Some of the car theft in South Africa can be attributed to the need of smugglers to transport cannabis from Lesotho to urban areas of South Africa. Other related activities, such as theft to fund cannabis consumption and perceived links with gun crime, ensure that the police are under pressure from the public to curtail the trafficking of cannabis into South Africa. On the basis of these findings it can be suggested that in general the LMPS view cannabis as an illegal, but not very serious activity that has some positive livelihood implications in Lesotho, in contrast to SAPS, who view the trade as an illegal activity that needs to be curtailed as it encourages additional criminal activities in South Africa. The exception to this being SAPS officers who profit from the trade themselves.

One of the issues examined during the research in Lesotho was the evidence of links between the cannabis trade, stock theft and the proliferation of illegal firearms. High levels of stock theft in Lesotho in recent years have led the authors of several studies to construct a perceived cyclical trade of cannabis, unregistered firearms and stolen livestock (e.g., Hennop, 2001; Kynoch & Ulicki, 2001; TRC, 2004; Dzimba & Matooane, 2005). While there is undoubtedly some truth to this assertion, it is wrong to portray cannabis farmers in particular, as hardened criminals who also engage in livestock theft and carry firearms. Yet all too frequently this is the image of cannabis farmers that is held by Basotho living in urban areas. Smugglers are more likely to be participating in any exchange existing between cannabis, firearms and livestock. What was evident during the fieldwork, however, was the much harsher stance taken by the LMPS in matters concerning illegal firearms and stolen livestock, in comparison to cannabis. Reports of illegal firearms would elicit a relatively fast response from the police, who would attempt to recover the firearm and detain anyone suspected of possessing an illegal firearm. Indeed, given that cannabis growing communities, such as Botsoapa, were reluctant to involve the police in village affairs, it would be sensible for them to avoid possessing illegal firearms or to engage in livestock theft. Therefore, while there may well be links

between the cannabis trade, the proliferation of illegal firearms, and livestock theft in Lesotho, the links should be examined in greater detail before theories transform into perceived facts. Certainly, most cannabis farmers in Botsoapa did not appear to be engaged in these other activities and while stock theft was an important issue in Botsoapa, most farmers did not perceive a link between the cannabis trade and stock theft. Indeed, the issue of stock theft is not one that is confined to cannabis producing areas in Lesotho, but is rampant across the country.

Corruption in Africa has been accused of seriously impeding the growth and effective utilisation of Africa's vast economic potential (Egbue, 2006). Natural resource-based African economies, in particular, are frequently singled out as having very high levels of corruption (Shaxson, 2007). Mazzitelli (2007) notes how corruption is facilitating the development of large criminal networks in regions, such as west Africa, that are trading in natural resource commodities, including diamonds, as well as drugs. The notion that natural resources cause corruption is often regarded as a gross over-simplification. While that might be the case, it is worth noting Vicente's (2006) investigation of corruption in São Tomé and Príncipe following oil discoveries there in the late 1990s. He concluded that there was a clear increase, amongst citizens, in perceived corruption in the public sector. Other studies have also demonstrated similar links between natural resources and corruption (Mehlum *et al*, 2006; Leite & Weidmann, 1999).

Chapter 9: Policy and extra-legal livelihood strategies

One of the initial research questions posited in Chapter 1 asked how a change in policies would affect the sustainability of the cannabis trade and what would the consequences be for those dependent on the trade? The first section of this chapter examines the issues facing the development of appropriate policies for extra-legal livelihood strategies. Following the discussion on the implications of policy change is an examination of the contributions political ecology, as a theoretical framework, can make to the study of extra-legal livelihood strategies. The final section comments on the challenges and opportunities in researching extra-legal livelihood strategies, based on the experiences from this project.

9.1 Issues for policy change in Lesotho

The role of development assistance, particularly in post-colonial Africa, is a highly contested one, with protagonists claiming that it provides a key solution for poverty in LDCs (Sachs, 2005), while antagonists view development assistance as being partly responsible for contemporary levels of underdevelopment (Easterly, 2007). Development assistance has frequently been provided during, or in the immediate aftermath of, conflict situations and its role in this regard has been examined and often found wanting (e.g., Esman & Herring, 2001; Duffield, 2001; Addison, 2003; Collier, 2003; Duarte, 2003; Spoor, 2004; Ibon Foundation, 2007). In contrast to situations of conflict, it is only more recently that a coherent focus on the interactions between development theory, assistance and the informal economy has begun to emerge (Chowdhury, 2006; Guha-Khasnobis & Kanbur, 2006; Tiwari, 2006; Guha-Khasnobis *et al*, 2007; Kabeer, 2007). While numerous studies have demonstrated the importance of the informal economy in different areas in Africa (e.g. Meagher, 1990; MacGaffey, 1991; Bayart *et al*, 1999; Smith, 2001; Mitullah, 2004; Devey *et al*, 2006), few studies have demonstrated the implications for development assistance to areas depending on incomes from extra-legal livelihood strategies.

The issue of economic development in drug producing regions has been a topic of considerable debate, although research has focused primarily on coca and opium poppy cultivation in South America and south Asia (Alvarez, 1995; Morrison, 1997; Byrd & Ward, 2004; Djedje & Korff, 2004). Drug control policies for areas of supply, particularly in South America, adopted aggressive approaches that have been accused of ignoring conventional development criteria, such as participation, sustainability, gender and poverty targeting (Mansfield & Sage, 1998). More recently, alternative development programmes have sought to replace drug production with alternative sources of income, by trying to make changes in the political and socio-economic environment (UNODC, 2005). Once again, most of these efforts have focused on higher value drug plants, such as coca and opium poppy, rather than cannabis,

although two notable exceptions to this are programmes in the Bekaa valley in Lebanon and the Rif Mountains in Morocco (Mansfield, 1999).

The results from this project in Lesotho have raised at least three important issues that need to be considered with regard to how development assistance is provided in areas dependent on income from extra-legal livelihood strategies. The first issue concerns the categorisation of households in terms of income and resources. None of the methods used to identify vulnerable households in Botsoapa considered income from cannabis production in their assessment of household resources. There are obvious reasons why the topic of cannabis income would be avoided, including the problem of false or underreporting on the part of householders if questioned about cannabis income, as well as political sensitivities. The fact remains, however, that household economy profiles are ignoring a resource that is responsible for approximately 27% of the total income received in the village.

A second issue that emerged from the study concerns the value to a community of development projects in which labour contributions are required on a frequent basis. During the research in Botsoapa, participating householders received food supplements in exchange for labour. Labour was used to establish three pilot fields where conservation agriculture was being practiced. In a community that is partly dependent on cash crop production, however, there is a need for clear policies in order to minimise the potential negative impact that may occur when labour is required elsewhere. While food for work schemes can be successful, there are issues that need to be considered carefully in order to minimise any negative impacts, such as encroaching on limited labour availability and reducing already scarce land resources (Barrett *et al*, 2004).

A third issue concerns the potential reluctance of people who are engaged in extra-legal livelihood strategies to become involved with Government agencies. While the community in Botsoapa was largely positive about the involvement of NGOs in the village, there was a reluctance to engage with Government agencies, especially when matters involving improved

infrastructure, such as roads, have been proposed. The feeling in the community, as expressed by the sub-chief in Ha Mantsi during an interview, is that improved roads would also mean an end to the cannabis trade. Improved roads would allow easier access for vehicles, especially the police, and enable the Government to more effectively monitor areas where cannabis is grown. While the logic of this argument might appear sound, it fails to reflect the current situation, whereby the police and other Government authorities are fully aware of the extra-legal activities taking place in Mapoteng. It could also be argued, as indeed the sub-chief did, that improved roads would also allow improved access to smugglers. An important factor relating to this issue is the success that a new local government has in gaining the trust of the communities that it represents. Unfortunately the signs from neighbouring countries that have undertaken similar initiatives on decentralisation are not promising. According to Tambulasi and Kayuni (2007), for example, who evaluated the first four years of a new local government system in Malawi, the creation of local government offices increased opportunities for corruption, mismanagement and loss of trust amongst the local electorate.

It is important to note that communities viewed extra-legal livelihood strategies as an opportunity to achieve levels of income that would not have been otherwise possible. The young male smugglers interviewed in the fieldwork were often the most vocal and optimistic in terms of the entrepreneurial opportunities that cannabis offered to them. Halvaksz (2007) recently encountered similar development aspirations amongst young males who were engaged in the cannabis trade in rural Papua New Guinea. Many of the older people engaged in the cannabis trade viewed their participation as necessary, although they were often uncomfortable about being involved in an illegal activity. In contrast, many of the young men viewed the trade positively, as an entrepreneurial activity that could fulfil their personal and communal notions of economic development in Mapoteng.

The absence of relevant literature indicates that until ten years ago Lesotho's status as a key cannabis producing country in the region had gone

largely unnoticed. A number of events have been responsible for the increased attention that Lesotho has received in the interim. Within Lesotho itself, as outlined in Chapter 8, research on rural livelihoods relating to the resettlement of people affected by the construction of the Mohale dam (LWHP, 1996a; 1996b; 1996c; 1997), as well as Laniel's (1998) brief report on cannabis production in the country, provided the first published evidence of the possible extent and importance of cannabis production in the country. The wider political context in southern Africa had also changed rapidly after the democratic elections in South Africa in 1994. SADC, previously an organisation dedicated to opposing apartheid South Africa, became a powerful regional political entity that incorporated the new South Africa at its helm. Regional wars ended, first in Mozambique and later in Angola. The formation of regional policies on a broad array of topics, including trade, transport, migration, and crime, ensured that the economies and policies of member countries underwent a previously unknown level of scrutiny (Lee, 2000; Isaksen, 2002; Klaaren & Rutinwa, 2006). Yet criminal networks also thrived in the new era of regional peace and stability. Gastrow (2001), for example, argues that organised criminals in SADC have achieved what politicians failed to, by creating a common market, for illicit commerce, in the region. Pressure from international agencies concerned with crime and drug production has also started to be felt in Lesotho. In Chapter 8, for example, it was noted that Lesotho has recently established a narcotics bureau (LENA, 2007), perhaps motivated by increasing pressure from the INCB (2007).

The African Union (AU) is another regional organisation that is achieving an increasingly powerful presence on the continent and through initiatives, such as the New Partnership for Africa's Development (NEPAD), it may become an important player in issues relating to the informal economy. NEPAD is an economic development program that was established by the AU in 2001. The principle purpose of the initiative is to encourage African integration into the global economy. As Olukoshi (2002) notes, however, there is concern that the policies implemented by NEPAD represent a continuation of the flawed

strategies that underpinned the neo-liberal economic, social and political reform agenda for Africa during the 1980s and 1990s. More radical commentators, such as Bond (2002:2), also reject NEPADs policies and believe the program is leading the continent down "a well-known, dusty path: a post-colonial, neoliberal cul-de-sac of predictable direction and duration". A program that advocates a neo-liberal agenda would seem unlikely to be sympathetic to policies that would assist marginalised communities who are dependent on income from extra-legal livelihood activities, such as cannabis production.

While the cannabis trade has been largely ignored to date by these regional organisations and international agencies, this may not remain the case indefinitely. An examination of the mechanics and dynamics of the cannabis trade is essential in order to understand the implications that any policy changes or stricter law enforcement strategies may have for those who depend on the trade. Indeed one of the stated research questions of this project targets the likely impacts of changes in government policies on production of and trade in cannabis, and on those dependent on incomes from these activities.

If existing legislation against the cannabis trade was effectively enforced, or if harsher policies were adopted and implemented, then a decline in the cannabis trade would undoubtedly have serious economic implications for communities, such as Botsoapa, who are heavily reliant on income from cannabis. Conversely, it may also be possible to introduce policies that would enable alternative incomes to be developed, and, if necessary, for the cannabis trade to be removed without major negative impacts. While there may be links between smugglers engaged in cannabis trafficking and the inflow of illegal arms and rising stock theft rates in Lesotho, they are ambiguous and appear to involve only a minority of those engaged in the cannabis trade. Therefore, pressure to curtail the trade in cannabis is unlikely to come from within Lesotho, but rather from South Africa, SADC and the wider international community (Mashele, 2005). There is also an institutional interest for some agencies, such as the INCB and UNODC, for maintaining and increasing the number of areas recognised as important drug producers. The importance of this institutional

interest was also identified by Anderson *et al* (2007) with regard to khat in east Africa, where efforts have been made to monitor and control the crop, despite its legal status. In Chapter 3, the increasingly prominent role of southern African cannabis production in the global drugs trade was clearly demonstrated. Lesotho's role in this trade means that there is a strong likelihood of there being further attention focused on cannabis producing activities in the country in the future.

Drug reduction policies in other parts of the world have tended to focus on reducing levels of production. The USA, in particular, has embarked on aggressive eradication strategies against coca and opium production in South America and, more recently, opium in Afghanistan. In the southern African region, in countries such as in Swaziland and Malawi, South African authorities have assisted in the eradication of cannabis by aerial spraying. While the environmental and socio-economic impacts of these aggressive eradication measures are not clearly understood, it is likely, based on evidence from other regions in the world, that they increase the vulnerability of already marginal groups (e.g., Joyce, 1999; Jelsma, 2001; Massey, 2001; Sunshine Project, 2005; Solomon, 2007).

One of the ways that the cannabis trade may be effected in Lesotho is if a clampdown on corruption occurred in the police and customs services. If these officials were no longer able or willing to receive bribes, and they acted more vigilantly against cannabis smugglers and farmers as a consequence, then a reduction in the trade volume would be likely. Any reduction in corruption, however, has to address the root causes of corruption, rather than simply focusing on stricter enforcement of anti-corruption policy (Bailey, 2004). A key issue, therefore, is likely to be the low wages received by the police: any reduction in corruption will have to address this issue, while mitigating any reductions in income to cannabis farmers as a result of disruptions to trade in their produce.

Recently there have been increasing calls for SADC members to develop policies that promote the position of the informal economy in the region (SADC,

2004; Mingxin, 2007). These policies would be aimed at activities such as street trading. Street trading has become an important focus for those studying the informal economy in cities across Africa, where traders are often subject to harsh and violent treatment (Lund *et al*, 2000; Valodia, 2001; Lourenço-Lindell, 2002; Lund & Skinner, 2004; Staples, 2007). Clearly, however, these calls for an incorporation of the informal economy concern activities that are perceived as benign, rather than those viewed as criminal, such as the production of and trade in cannabis. Mashele (2005), for example, believes that the cultivation of cannabis in southern Africa is the result of a de-linking of urban and rural economies. Reintegrating those economies, he argues, will help reduce cannabis cultivation. While the traditional migrant labour system may have collapsed, there is little evidence in the current research of a de-linking of urban and rural economies. With young women from Botsoapa working in the textile factories in urban Lesotho, and traditional healers practicing in border towns, there are still strong socio-economic ties between rural and urban areas. Indeed, the cannabis trade itself is inextricably linked with the urban areas of South Africa.

The promotion of the legal production of hemp as an alternative to the cultivation of cannabis as a drug was discussed in Chapter 3, with reference to projects in Swaziland and South Africa (Hall, 2003; IRIN, 2003; ARB, 2006; IRIN, 2006a). A conversion to legal hemp production probably represents the most likely means by which the cannabis trade could be incorporated into legal circuits. In fact, Fortenbery and Bennett (2004) found that hemp is unlikely to become commercially viable in the highly mechanised systems of agriculture employed in MDCs, due to the labour intensity associated with the harvesting and processing of the crop. Therefore, hemp could be a crop that LDCs with suitable environments, such as Lesotho, may have a competitive advantage in as a result of their labour intensive farming systems. Similar experiments have occurred with other drugs, most notably opium. The global pharmaceutical industry requires opium for the manufacture of pharmaceutical drugs. The legalisation and licensing of opium production in Afghanistan has been

considered as a possible remedy for illicit opium producers there (Mansfield & Pain, 2006; UNODC, 2007c). A recent report by the Senlis Council (2007) demonstrated how a shift in the global trade regulations governing legal opium would allow a switch to legal production in Afghanistan, and provide a solution to some of the problems leading to political instability, as well as providing livelihood opportunities for opium farmers. Currently, however, the industry's raw opium requirements are being met, more than adequately, by legal opium production elsewhere in Turkey and India. There is, therefore, no demand for an increase in the legitimate production of opium (Felbab-Brown, 2007). Related to this issue is the fact that legally produced opium receives a much lower price per unit than illegally produced opium, so there may be little incentive for farmers to switch. Finally, Felbab-Brown (2007) notes that political stability is also a requirement if such a shift were to take place, as the monitoring of legalised crops would require a peaceful environment with strong regulatory controls. Certainly the policies employed to date, such as alternative development, have involved more rhetoric and attention to a statistical reduction in opium output than a focus on the livelihoods of those affected by such policies (Mansfield and Pain, 2005).

While the issues concerning opium production in Afghanistan obviously have much more serious political and socio-economic import than cannabis in Lesotho, the underlying lessons remain the same. In order to integrate successfully any informal and extra-legal economy into a formal economy, a livelihood focus on those engaged in the economy must be paramount. Over four decades of attempts at supply-side drug reduction, primarily in LDCs, have been largely unsuccessful, arguably as a result of a criminal focus as opposed to one on livelihoods. Concerned with reducing global drugs statistics, the importance of ensuring socio-economic well-being for the marginalised communities producing the drugs has been frequently overlooked. While the incorporation of a livelihoods focus presents challenges, it is essential for the long-term prospects of both the community and sustaining the reduction of extra-legal activities.

9.2 A political ecology approach to extra-legal livelihoods: the cannabis trade

A focus on marginalised populations and the underlying issues that can lead to marginalisation, especially as a result of unequal forms of access and control over resources, has been at the centre of the political ecology framework since its inception (Watts, 2000; Robbins, 2004; Neumann, 2005). Chapter 2 noted how political ecology research has been conducted across a range of natural resource based extra-legal economies. Yet it was also pointed out that many of these studies are primarily concerned with how these extra-legal economies engage with regional and global political economies, often, it would seem, at the expense of detailing the reality of life in rural communities. With regard to the concept of adaptation, Perramond (2007) argues that events witnessed at the local level often have considerable import that can be missed if the primary focus of researchers is making associations with the larger political economy. While establishing lilnks with the wider political economy is an essential part of examining extra-legal economies, it is also important that individual research studies engage with local communities and pay attention to events occurring at the local level.

As outlined in Chapter 2, the process of marginalisation in political ecology research is most commonly uncovered by identifying forms of access and control, as well as identifying the key decision-makers (Robbins, 2004; Neumann, 2005). While the findings from this project did not provide a detailed investigation of the intra-household dynamics concerning the control of cannabis, micro level power structures in the community were identified. First, there was a shift in gender roles in agriculture in the village, with the result that women appear to have lost some control that they previously exerted over farm incomes. Second, clear imbalances existed within the community, in terms of the distribution of resources. Maintaining positions of political power appears to play a key role in successful engagement in cannabis production, as the findings showed that the chief's household in Botsoapa was producing substantially more cannabis than other households. Third, traditional political

power structures outside the village, in the form of the chieftainship hierarchy, exert considerable influence over those engaging in the cannabis trade. The chieftainship forms the link between those involved in cannabis and central and local government structures. In such circumstances, it is in the interest of the chieftainship to straddle the political divide that exists between the electorate and Government, and in so doing strengthen the position of the chieftainship.

Finally, the police represent an essential factor in the successful operation of the cannabis trade in rural Lesotho. Only with their tacit involvement or neglect can the trade function. Whilst recognising the important benefits of the cannabis trade as a livelihood for farming households, the trade also appears to be providing many police themselves with the option of an improved livelihood portfolio.

Decision-making amongst farmers is dependent on economic pressures and political contingencies, with the former dictating land management goals and the latter determining land management opportunities (Robbins, 2004). The important lesson from this is that changing political and economic conditions alter the context of decision-making. As has already been argued in this chapter, such changes are likely to impact upon the viability of the cannabis trade in Lesotho, therefore having an important influence on its mid- and long-term future.

Rubio's (1997) identification of perverse social capital in the drug producing regions of Columbia was also clearly in evidence in Botsoapa, although the terminology does not seem entirely appropriate. By engaging in extra-legal livelihoods, communities can be drawn together, motivated by a desire to move beyond the watchful eye of Government officials. In Botsoapa, this resulted in the community assuming responsibility for many issues relating to governance. If a higher authority needed to be consulted, the communities went to the chiefs rather than the local government. Uncovering the dynamics of decision-making is a key strength of the political ecology framework, and is particularly important in situations involving extra-legal livelihood strategies that may become the target of interventionist policies. Efforts to intervene in the

opium trade in Afghanistan, for example, have highlighted the importance of understanding these decision-making structures (Mansfield & Pain, 2005).

While many extra-legal livelihood strategies attract a variety of public and academic supporters and critics, the politics of drug production control are intensely controversial. Anderson *et al* (2007) noted how khat has been held disproportionately responsible for a range of social ills amongst users, such as divorce, prostitution, begging and the abandonment of families, as well as psychological dysfunction. It is not only consumers of drugs who are vilified by their association with drugs, but growers too. A common perception, particularly amongst urban dwellers in Lesotho, was that those engaged in cannabis growing were also engaged in a multitude of other nefarious crimes.

The attitude displayed by public opinion in MDCs about rural drug producers in LDCs demonstrates many similarities to debates over conservation policies, for example. In Chapter 2, the role that political ecology research has played in challenging prevailing attitudes in MDCs towards conservation policies in LDCs was discussed. Brockington (2002), for example, argued that conservation policies based on the preservation of a pristine wilderness have omitted histories of residents and labelled their livelihood activities as damaging. Similar arguments can be made against the attitudes frequently displayed towards those involved in the production of crops, such as cannabis. Socio-economic circumstances are often overlooked and instead the actions of producers are discussed using moralistic terminology, or by making direct associations between growers and organised crime (Davids, 2002; Roleff, 2004).

Considerable progress has been made in the integration of conservation policies and livelihood concerns in recent years, as well as a refocusing of the conservation agenda towards those most directly impacted (e.g., Salafsky, 2000; Ghazoul, 2007; Githiru, 2007; Kaimowitz & Sheil, 2007; Medley & Kalibo, 2007). A similar theoretical framework and debate can be usefully applied to issues resolving around drug production in LDCs, with the recognition that if

drug resources are going to be removed from these communities, then substitutes must be found prior to their removal.

A final point to consider in any issue relating to policy development and extra-legal livelihood strategies is the role of the State and its agents. Indeed the use of the term extra-legal has been justified, based on the belief that the term more accurately reflects the involvement and collusion of the State in activities like the cannabis trade in Lesotho. While a global phenomenon, there are often greater opportunities for collusion between a state and those engaging in extra-legal activities in LDCs that are highly dependent on natural resource extraction (Leite & Weidmann, 1999; Mock, 2003; Kronenberg, 2004; Damania & Bulte, 2005). Shadow economies are functioning parallel to formal economies and often the distinction between Government agents and organised criminals becomes blurred and overlaps (Bayart, 1993). Reno (1998) argues that much greater attention needs to be paid to these shadow economies. The hidden economy of the cannabis trade in Lesotho clearly demonstrates how important these economies can be, but also highlights their fragility, and the vulnerability of individuals and communities who are dependent on the income from cannabis production.

9.3 Challenges and opportunities in researching extra-legal livelihood strategies

The methodology and ethical conundra encountered in researching extra-legal rural livelihood strategies, particularly illegal crops, are immense and indeed embody an abnormal amount of consideration in comparison with other topics. The study of extra-legal crop production is theoretically challenging, with many issues related to illegal drugs being heavily loaded with value judgements and unspoken assumptions (Thoumi, 2003). During the course of this project judgments and assumptions like these have been encountered amongst colleagues, senior academics, and, less surprisingly, amongst Government representatives of both LDCs and MDCs, as well as members of police forces. The majority of encounters with such individuals has involved a certain level of

scepticism and ridicule, ranging from lighthearted banter to serious suggestions that the research was inappropriate or inadvisable. These encounters often result in defensive mechanisms being established by the researcher when discussing the research, as well as preventative measures for avoiding confrontation, such as when applying for funding or in requests for letters of support.

The perceptions encountered reflect the diversity of opinions on how the issues of drug production and recreational use should be dealt with in the world today. Amongst those who believe in the regulation and criminalisation of such drugs, there is little agreement as to which strategies are the most effective at either the demand-side, by reducing drug use, or at the supply-side, by reducing drug production (Fisher, 2006). Underneath whatever policy decisions are made are people who, through either necessity or by choice, are dependent on the trade. For those in the former category it is vital that their participation in the process be considered in a humane and sensitive way that also puts preconceived judgements aside.

Another challenge concerns moving beyond the rhetoric of community incorporation into research analysis. As Perramond (2007:8) asks, "how many of us share our political projects or theoretical perspectives with the very people we work with?". Undoubtedly this is a valuable consideration, especially when engaging in research that purports a certain level of activism, but the realities of conducting research in settings of extra-legal livelihood activities frequently precludes such engagement. Obviously when a researcher adopts a covert methodological approach to researching extra-legal economies then a position of open analysis is ruled out. Even in situations, however, where an overt stance is adopted, research participants themselves may not be ready to engage in debate over the analysis of their livelihoods, as feelings of suspicion and mistrust may remain. In the context of this project, there were extra considerations, most importantly the presence of a language barrier, that further complicated any engagement with respondents on the theoretical underpinnings of this project.

Chapter 10: Conclusions

This, the final, chapter revisits the initial research questions and examines the extent to which they have been addressed through the key findings from the project. Following this is an examination of the role that political ecology can play in the future research of extra-legal livelihood strategies, based on the experiences from this project. The chapter concludes with a brief discussion of future areas for potential research.

The project has examined cannabis cultivation and trade in rural Lesotho using a multi-strategy approach that combined quantitative and qualitative methodologies. The findings from the research clearly demonstrate the importance of cannabis as a rural livelihood strategy in the study area. It is argued, however, that cannabis production is more properly regarded as a coping strategy for a community faced with severe socio-economic and environmental challenges, rather than a core strategy of economic accumulation. While the research focused on a small study area, and therefore the findings should not be generalised, the conclusions from the project provide important lessons and highlight potential areas of future research.

Understanding the role and importance of the cannabis cultivation as an extra-legal rural livelihood strategy in the context of contemporary ecological, socio-economic and political factors in Lesotho provided an important focus for the research. The findings from the thesis clearly demonstrate the importance of cannabis from both an economic perspective, in terms of the income brought into a cannabis producing household, and from an agricultural perspective. Cannabis income was found to contribute approximately 27% of the total income to the village of Botsoapa and was grown in the majority of households. However, clear disparities were evident between households. Agricultural output was usually determined by the ability of a household to purchase agricultural inputs, meaning that wealthier households often planted more cannabis than poorer households. However, the income from cannabis was proportionately more important for poorer households than wealthy ones. Wealthier households tended to rely on non-farm income to a greater extent, from a combination of wage labour, remittances and State pensions. In contrast, poorer households often lacked access to non-farm income and income from the sale of cannabis represented the sole or principal source of cash income. While a relatively low level of income inequality was found in comparison to national averages, cannabis output and agricultural assets, such as fields and livestock, were still spread very unevenly between households in Botsoapa. Evidence from household expenditure recordings and key

informants supports the idea that the income from cannabis is being primarily used to achieve food security and provide access to basic services, such as education and health care.

Two of the principal challenges facing households dependent on income from cannabis were the seasonal fluctuation in market price and a decline in price. As demonstrated in Chapter 8, however, neither of these factors are unique to cannabis, but represent two of the most important issues facing smallholder cash crop production in LDCs. While potential solutions have been proposed for other cash-crop dependent communities in Africa, such a situation is unlikely to occur as long as cannabis production is against the law.

From an agricultural perspective, cannabis was roughly as important as maize, as the two dominant crops were planted in almost identical proportions in Botsoapa, the former providing income and the latter food. Qualitative evidence gathered during informal discussions with cannabis farmers, pointed towards a decline in yield from cannabis plants. The use of artificial fertiliser, the practice of continuous monocropping, and a slight increase of farming on marginal land, may have contributed to this decline in yield. Furthermore, seeds from cannabis plants are replanted each season leading to a decline in genetic input that may also lead to lower yields.

The research also aimed to determine how the cannabis trade, as an extra-legal livelihood strategy, both incorporated and isolated different political and authoritative entities in Lesotho. One of the key findings to emerge from the project was the important role that criminalised networks serve in allowing extra-legal trades to function. These networks include smugglers, as well as entities like the police and chieftainship. Indeed, while the physical isolation of activities, such as drug production, is often perceived as an important factor for their development, evidence from the research suggests that the criminal networks that allow the functioning of the extra-legal trades are even more crucial. In the case of Botsoapa, customary authority appeared to be strengthened by the presence of the cannabis trade. The community frequently engaged in self-governance or allowed the chieftainship to arbitrate on

community matters, in preference to involving State agencies, such as the local government and the police. Police involvement in village affairs was minimised unless absolutely necessary, due to a fear of police eliciting bribes as a result of uncovering stored cannabis. This self-imposed isolation from State agencies poses particular challenges to any development, such as improvements in rural infrastructure that may be proposed for the area. As players in the cannabis trade and mediators between the State and the community, the chieftainship could potentially play an important role if any debate were to occur between the State and cannabis farmers over the issue of cannabis.

Interviews with cannabis smugglers revealed that they were less concerned about interactions with the police than were cannabis farmers. There was a clear understanding between smugglers and police with regard to the payment of bribes to ensure the safe passage of cannabis smugglers from Lesotho into South Africa. South African police attitudes to the cannabis trade appeared markedly different from those of the Lesotho police, for whom cannabis trafficking was less of a priority. Indeed, it would appear to be very profitable for many police in Lesotho to allow the trade continue. From the perspective of the South African police, however, cannabis was closely linked with other criminal activities in South Africa, such as car theft. SAPS also faced political pressure from those who were effected by the trade, such as farmers residing in the eastern Free State along the border with Lesotho border. Conversely, while cannabis trading may be linked to the increased availability of illegal firearms and consequent rise in stock theft in Lesotho, there was no definitive evidence to support this claim.

The potential effects of a change in policies on the sustainability of the cannabis trade and those dependent on the trade were also a focus of the current research. Domestic policy towards cannabis production in Lesotho would be most likely to change if pressure from international sources, such as the South African government, international agencies responsible for drug reduction, or regional organisations, is placed on the Government of Lesotho to act on the issue. While the South African authorities have been active in other

countries in the region in supporting cannabis eradication policies, they have had relatively little direct involvement in Lesotho. One potential reason for this is that political relations between Lesotho and South Africa have often been characterised by disputes and disagreements, most recently in 1998 when South African troops entered Lesotho following a political coup. There may be political reluctance, therefore, to involve South African authorities in direct eradication efforts in Lesotho. More recently the INCB have encouraged Lesotho to increase efforts against drug production and, apparently as a result of this pressure, a narcotics board is due to be established shortly. While a narcotics board may improve the coordination of agencies involved in drug control, they will have to obtain the compliance of rank and file police in order to implement any effective policy against cannabis production.

As noted in Chapter 9, development assistance is usually concerned with supporting the poorest households, and their method of identifying the poorest households when dependence on hidden economies is present is problematic. Households are unlikely to declare their income from extra-legal activities, particularly to agencies offering support through food or wage labour. Other issues related to development assistance concern the reluctance of communities engaged in extra-legal livelihoods to encourage the development of rural infrastructure, such as roads.

The underlying conclusion to emerge from the findings is that cannabis cultivation in rural Lesotho should be viewed as a coping strategy as opposed to criminal opportunism. Cannabis producing households were generally only meeting their subsistence needs, if that, with the income they received from cannabis. Any policies that attempt to reduce cannabis production in Lesotho will have a large and serious impact on a crucial coping strategy for marginalised rural households. While nationwide estimates of cannabis production were not a focus of this project, it is clear from secondary statistics, such as seizures by South African authorities at Lesotho border posts, that cannabis is being produced in many areas of rural Lesotho. Other potential possibilities exist, such as the legal production of hemp, but they are untested

and would be in competition with other countries in the region that are attempting similar schemes, as well as being less profitable that cannabis production.

Political ecology provides a very useful framework for examining drug production as an extra-legal livelihood strategy. The framework emphasises the relations of power between different actors, and its focus on global linkages, and these aspects are very important when analysing international drug trades. Similarly, a focus on root causes of marginalisation enables construction of an accurate historical context in which to place the research. One concern, however, is that critical political ecology is empirically based rather than influenced solely by theoretical constructs with regard to global linkages of capitalism and markets. This project has attempted to provide an example of how empirically based research can contribute to studies involving extra-legal livelihoods. There are often important methodological challenges to conducting studies on criminalised activities, but it can be argued that the benefits accruing from the research outweigh the negative implications if due care is taken.

There is a lot of scope for expansion of research on extra-legal livelihood strategies. While informal economies in urban settings have experienced a high level of attention in recent years, informal and extra-legal economies in rural areas are often a by-product of studies centred on other issues, rather than a direct focus of research projects. Advances in political ecology, particularly in the area of conservation, have highlighted the importance of hidden economies in livelihood strategies at the level of the household. There is also a tendency to employ qualitative methodologies when engaging with informants concerning extra-legal livelihoods. There are important reasons for this, especially with regard to the difficulties of under-reporting or false reporting with quantitative approaches. Yet an inclusion of quantitative approaches is worthy in terms of both estimating the value of income derived from extra-legal livelihood activities, as well as agricultural output. Quantitative approaches are also crucial when engaging with policy makers, in order to forecast the potential implications, for livelihood strategies in rural areas, of a reduction in activities

like cannabis production. However, there is a risk that policy makers could use the information as catalyst for negative intervention, when the scale of activities is uncovered.

Based on the findings from the project, there are at least three key areas where future research is warranted. First, there is remarkably little detailed environmental knowledge gathered in regions of drug production. There are obvious reasons for this, but given that international agencies, such as the INCB (2004), are positing that drugs production increases environmental damage, there is an urgent need to research this issue in a scientific manner. Second, in the context of Lesotho it would be particularly useful if similar ethnographic approaches were adopted to examine drug trades from the perspective of authorities, especially the police. In this project, identification with the cannabis growing community meant that interaction with the police was initially deliberately limited, and closer links were subsequently difficult to develop. Researching the perspectives of the police towards cannabis growers and smugglers, as well as their perspectives on bribery, would allow for greater appreciation of how institutional actors, such as the police, interact with extra-legal activities. Finally, a commodity chain approach to cannabis production in Lesotho, which would also incorporate research along smuggling routes and centres of consumption in South Africa, would provide a better understanding of the value added at different points between production by the farmer and consumption by the user, as well as gain a true appreciation of the geographical extent of the cannabis trade.

Household number_____Date_____Village_____

1. Household information

HH member	Sex	Rel to Head	Marital status	Highest school	Type of work	Where living	Where working	Months away/yr	Group(s)
Head									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									

SEX
1 male
2 female

REL TO HEAD
0 none
1 head
2 spouse
3 child
4 grandchild
5 in-law
6 parent
7 grandparent
8 sibling
9 other

MARITAL STATUS
0 unmarried
1 married
2 cohabiting
3 divorced
4 separated
5 abandoned
6 widowed
7 other

TYPE OF WORK
0 none
1 farmer
2 housework
3 mines
4 farm SA
5 wages SA
6 other SA
7 wage worker
8 scholar 18 self employed
9 on pension
10 retired miner
11 shepherd
12 other___

PLACE LIVING/ WORKING
1 this household
2 this village
3 nearby village
4 Mapoteng area
5 Maseru
6 South Africa
7 other_____

GROUP MEMBER
0 none
1 burial society
2 christmas savings club
3 farmers group
4 VDC
5 grazing committee
6 other_____

2. LAND Fields owned (sharecropped)		Fields cultivated - total (owned +/- rented / sharecropped land)	

3. LIVESTOCK

Livestock Type:	**1.**	**2.**	**3.**	**4.**	**5.**
No. owned					

4. INCOME FROM LIVESTOCK

E.g. Sale of livestock (e.g. cows, goats, sheep, chickens), **livestock rental, other livestock products** (e.g. hides, milk, eggs, meat)	Total Sold	When?	Price per unit sold	Cash income
			TOTAL Income =	

5. PURCHASE AND EXCHANGE of staple and non-staple FOOD for consumption (not for trade)

Commodity (e.g. cereals, pulses, oil, sugar, meat)	**Quantity purchased**	**Frequency** (per week or month)	**Duration** (number of weeks or months)	**When** (which months?)	**Total cost**
Purchased food & cost total →					

6. FOOD AND CASH FROM CROP PRODUCTION: since September 2005 to September 2006.
Own crop production:

Crop (food crops, cash crops, vegetables, crop	**Quantity produced**	**When**	**Quantity sold / exchange**	**Price sold per unit**	**Cash income**	**Other use**[63]
Total crop food & income →						

7. LABOUR EXCHANGE (payment in food)

Activity	**Number of people doing this activity**	**Frequency** (per week or month)	**Duration** (no. of weeks or months)	**When** (which months?)	**Payment per unit of work**	**Total kilos received per**
Labour exchange total →						

[63] 'Other uses' for crops include: seed, payment for labour, repayment of loans, gifts (to other households, church, funerals, etc.), brewing, stored until next year

8. RELIEF/ GIFTS / LOANS / TARGETED FEEDING (OF FOOD)

Description	**How often & for how long?**	**When -** which months?	**Total received**	**Quantity sold**	**Price per unit sold**	**Food income**	**Other use** (e.g. gifts,)
Total →							

9. CASUAL LABOUR / EMPLOYMENT / REMITTANCES IN CASH

Activity / income source[64]	**Number of people doing this activity**	**How often & for how long?**	**When** (which months?)	**Payment ?**	**Total cash income per year**
Total →					

10. OTHER FOOD SOURCES (e.g. stocks carried over from previous year; wild foods)

Commodity	**Quantity**	**Sold**	**Other use**

[64] Checklist: agricultural labour (clearing fields, preparing land, planting seeds, weeding, harvesting, threshing), construction, brick making, house smearing, thatching, skilled casual labour (e.g. carpentry), salaried employment, domestic work, livestock herding, pension, remittances.

11. SELF-EMPLOYMENT / SMALL BUSINESS / TRADE

Activity / income source[65]	**Unit of measure** (e.g. bundle, sack, period)	**Number of people doing this**	**How often & for how long?**	**When** (which months?)	**Price per unit sold**	**Total cash incom e per**
Total →						

12. OTHER CASH INCOME SOURCES – GIFTS / LOANS

Activity / income source	**Unit of measure** (e.g. bundle, sack,	**Number of people doing this**	**Frequen cy** (per week	**Duration** (no. of weeks or	**When** (which months?)	**Price**	**Total cash income**
Total →							

13. COPING STRATEGIES:

i) Has the past year (September 2005 – August 2006) been a good year or bad year for your crops compared to previous years? Why?

ii) In a bad year, what do you normally do to make sure your household has enough food and money for expenses other expenses such as education?

[65] Checklist for self-employment: collection of firewood, grass, handicrafts, brewing. Checklist for small business and trade: petty trade, trade, rental/hire, and shops.

14. EXPENDITURE PATTERNS:

Main Expenditure Categories	Typical Annual Amount Spent			
	Quantity (unit) purchased [a]	**Frequency purchased [b]**	**Price per unit [c]**	**Total = [a] x [b] x [c]**
Main food items	→	copy total from	page 4, section 7	→
Staple food				
Other				
Household items				
Tea/coffee				
Salt				
Soap				
Kerosene/paraffin				
Grinding of grain				
Water				
Firewood/charcoal				
Utensils/pots				
Inputs				
Livestock drugs				
Water for animals				
Land rental				
Ploughing				
Seeds				
Tools				
Agricultural inputs				
Agricultural labour				
Business investment				
Livestock investment				
Social services				
School (fees,uniform,etc)				
Medicine				
Other expenditure				
Clothing				
Taxes				
Beer				
Cigarettes/tobacco				
Community obligations				
Transport				
Festivals				
Other				
Other				
Other				
EXPENDITURE TOTAL (REMINDER: cross check with total income) →				

Appendix II

The following are the results from the section on population data from the household survey. Refer to Appendix III for full variable titles.

HH No.	Member	Gender	Rel.	Marital status	School	Work	Where Live	Where work	Mths away
1	1	1	1	1	0	1	2	2	0
1	2	2	2	1	4	1	2	2	0
1	3	1	3	1	5	1	2	2	0
1	4	2	5	1	7	1	2	2	0
1	5	2	4	0	0	0	2	0	0
2	1	1	1	1	6	7	2	4	12
2	2	2	2	1	6	1	2	2	0
2	3	1	3	0	9	0	2	0	0
2	4	1	3	0	9	8	2	0	0
2	5	1	3	0	7	8	2	0	0
2	6	1	3	0	2	8	2	0	0
2	7	2	3	0	2	8	2	0	0
2	8	1	3	0	1	8	2	0	0
2	9	1	3	0	0	0	2	0	0
3	1	2	2	1	0	1	2	0	0
3	2	1	9	1	4	1	2	0	0
3	3	1	9	0	0	1	2	0	0
3	4	1	9	0	4	11	2	0	0
3	5	1	4	0	2	8	0	0	0
3	6	2	8	1	6	1	2	0	0
3	7	2	9	0	7	1	2	0	0
3	8	2	4	0	0	0	0	0	0
4	1	1	1	1	3	1	2	2	0
4	2	2	2	1	9	1	2	2	0
4	3	1	3	0	5	0	2	0	0
4	4	2	3	0	7	8	2	0	0
4	5	2	3	0	5	8	2	0	0
4	6	2	3	0	0	0	2	0	0
5	1	2	2	1	6	1	2	2	0
5	2	1	3	0	2	1	2	2	0
5	3	1	4	0	0	0	0	0	0
5	4	2	3	0	9	7	5	5	12
5	5	2	3	0	6	7	5	5	12
6	1	2	2	1	0	9	2	2	0
6	2	1	4	1	4	10	2	2	0
6	3	2	4	0	7	8	2	0	0
7	1	2	1	1	3	1	2	2	0
7	2	2	3	0	2	0	2	0	0
8	1	1	1	1	0	1	2	2	0
8	2	2	2	1	4	1	2	2	0
8	3	1	6	0	3	9	2	2	0

8	4	1	3	1	3	5	6	6	10
8	5	1	4	0	0	0	2	0	0
8	6	2	6	1	3	9	2	2	0
8	7	2	5	1	5	1	2	2	0
9	1	1	1	1	5	1	2	2	0
9	2	2	2	1	3	1	2	2	0
9	3	1	3	0	0	0	2	0	0
10	1	1	1	1	4	7	2	2	0
10	2	2	2	1	3	1	2	2	0
10	3	1	3	0	2	8	2	0	0
10	4	1	3	0	0	0	2	0	0
10	5	2	3	0	0	0	2	0	0
10	6	2	3	0	0	0	2	0	0
11	1	2	2	1	0	1	2	2	0
11	2	1	3	1	12	12	7	7	9
11	3	1	9	0	9	11	2	2	0
11	4	1	4	0	8	8	2	0	0
11	5	1	4	0	4	8	2	0	0
11	6	1	4	0	0	0	2	0	0
11	7	2	5	1	9	2	2	2	0
11	8	2	5	1	12	7	5	5	1
11	9	2	4	0	7	8	5	0	1
11	10	2	4	0	7	8	2	0	0
11	11	2	4	0	4	8	5	0	1
12	1	2	2	1	7	1	2	2	0
12	2	2	3	4	10	0	2	0	0
12	3	2	4	0	1	8	2	0	0
13	1	2	2	2	5	9	2	2	0
13	2	1	9	0	5	11	2	2	0
13	3	1	4	0	4	8	2	0	0
13	4	2	4	0	6	8	2	0	0
14	1	1	1	1	0	9	2	2	0
14	2	2	2	1	4	1	2	2	0
14	3	1	3	0	3	0	2	0	0
14	4	2	3	0	7	8	2	0	0
14	5	2	3	0	3	8	2	0	0
15	1	1	1	1	4	1	2	2	0
15	2	2	2	1	6	7	2	3	0
15	3	1	3	0	0	0	2	0	0
15	4	2	3	0	3	8	2	0	0
15	5	2	3	0	2	8	2	0	0
15	6	2	3	0	0	0	2	0	0
16	1	2	2	1	4	1	2	2	0
16	2	1	3	1	1	1	2	2	0
16	3	2	5	1	0	2	2	2	0
16	4	2	3	3	6	2	2	2	0
16	5	1	4	0	2	8	2	0	0
16	6	1	4	0	0	0	2	0	0

17	1	1	1	1	0	1	2	2	0
17	2	2	2	1	3	1	2	2	0
17	3	1	3	0	0	0	2	0	0
18	1	1	1	1	0	10	2	2	0
19	1	2	1	3	4	1	2	2	0
19	2	1	3	0	10	8	2	2	0
19	3	1	4	0	1	8	2	0	0
19	4	2	4	0	0	0	2	0	0
20	1	1	1	1	3	1	2	2	0
20	2	2	2	1	7	1	2	2	0
20	3	2	3	0	6	8	2	0	0
20	4	2	3	0	2	8	2	0	0
20	5	1	3	0	0	0	2	0	0
21	1	2	2	1	7	1	2	2	0
21	2	2	3	1	7	1	2	2	0
21	3	1	3	0	4	8	2	0	0
21	4	1	3	0	7	8	2	0	0
21	5	2	3	0	2	8	2	0	0
21	6	2	4	0	1	8	2	0	0
21	7	2	4	0	0	0	2	0	0
22	1	1	1	1	5	1	2	2	0
22	2	2	2	1	6	1	2	2	0
22	3	1	3	0	2	8	2	0	0
22	4	2	3	0	0	0	2	0	0
23	1	1	1	1	2	1	2	2	0
23	2	2	2	1	6	1	2	2	0
23	3	1	3	0	4	1	2	2	0
23	4	1	3	0	6	8	2	0	0
23	5	2	3	0	5	8	2	0	0
23	6	2	3	0	3	8	2	0	0
23	7	1	3	0	1	8	2	0	0
23	8	1	9	0	10	8	2	0	0
23	9	2	9	0	8	8	2	0	0
24	1	2	2	1	4	2	2	2	0
24	2	1	3	1	4	1	2	2	0
24	3	1	3	1	3	1	2	2	0
24	4	1	3	0	3	1	2	2	0
24	5	2	5	1	5	1	2	2	0
24	6	2	5	1	7	1	2	2	0
24	7	1	4	0	0	0	2	0	0
25	1	1	1	1	0	1	2	2	0
25	2	2	2	1	3	1	2	2	0
25	3	2	3	0	0	0	2	0	0
25	4	1	3	0	0	0	2	0	0
26	1	1	1	1	2	1	2	2	0
26	2	1	3	0	1	1	2	2	0
26	3	1	3	0	2	8	2	0	0
27	1	2	2	1	3	1	2	2	0

27	2	1	3	3	5	10	2	2	0
27	3	1	3	3	10	10	2	2	0
27	4	1	4	0	7	8	2	0	0
27	5	2	4	0	6	8	2	0	0
28	1	1	1	1	5	3	6	6	12
28	2	2	2	1	7	2	2	2	0
28	3	1	3	0	2	8	2	0	0
28	4	1	3	0	0	0	2	0	0
29	1	1	1	1	3	1	2	2	0
29	2	2	3	0	2	8	2	0	0
29	3	2	3	0	1	8	3	0	0
30	1	1	1	1	2	1	2	2	0
30	2	2	2	1	6	1	2	2	0
30	3	1	3	0	0	0	2	0	0
31	1	1	1	1	3	12	2	2	0
31	2	2	2	1	7	1	2	2	0
31	3	1	3	0	0	0	2	0	0
31	4	2	3	0	0	0	2	0	0
32	1	2	1	1	7	1	2	2	0
32	2	1	3	0	7	1	2	2	0
32	3	1	3	0	5	1	2	2	0
32	4	1	3	0	4	1	2	2	0
32	5	1	3	0	4	8	2	0	0
32	6	2	3	0	2	8	2	0	0
32	7	1	3	0	0	0	2	0	0
33	1	1	1	1	3	10	2	2	0
33	2	2	2	1	3	1	2	2	0
33	3	1	6	1	0	9	2	2	0
33	4	2	6	1	3	9	2	2	0
33	5	2	3	7	7	12	2	2	0
33	6	1	3	1	10	6	2	6	10
33	7	1	3	0	9	6	2	6	10
33	8	1	3	0	7	1	2	2	0
33	9	1	9	0	0	1	2	2	0
33	10	2	5	1	12	2	2	2	0
33	11	1	4	0	0	0	2	0	0
33	12	2	4	0	1	8	2	2	0
33	13	2	4	0	0	0	2	0	0
33	14	1	4	0	1	8	2	2	0

HH No.	HH Pop	Fields Total	Fields (owned)	Fields (shcropd)	Livstk units	Inc Livstk	Maize (kg)	Sorg (kg)	Beans (kg)	Canbs (kg)	Inc canbs	Inc other crps
1	5	3	3	0	149	1400	400	110	30	320	1800	0
2	9	3	2	1	39	640	80	0	80	480	1800	0
3	8	6	6	0	63	250	300	0	20	540	2900	0
4	6	5	4	1	13	0	140	0	20	420	1550	0
5	5	14	14	0	28	80	400	0	40	300	900	0
6	3	7	7	0	18	0	100	250	20	50	350	0
7	2	4	4	0	9	0	0	0	0	0	0	0
8	7	8	8	0	60	0	240	80	0	450	1800	0
9	3	2	2	0	6	0	0	0	0	280	1900	0
10	6	3	3	0	0	0	80	0	0	0	0	0
11	11	2	1	1	59	0	880	880	0	0	0	0
12	3	3	3	0	0	0	80	0	30	200	800	0
13	4	17	17	0	11	0	400	40	0	100	400	0
14	5	17	17	0	26	0	400	60	0	100	400	0
15	6	8	8	0	33	0	70	20	0	300	2100	0
16	6	7	7	0	13	0	140	0	0	120	500	0
17	3	8	8	0	25	0	320	40	60	260	1500	0
18	1	12	12	0	29	0	600	100	0	0	0	0
19	4	3	3	0	0	100	120	60	40	140	800	0
20	5	11	11	0	6	0	80	40	0	50	200	0
21	7	7	7	0	4	0	0	320	20	950	6650	0
22	4	2	2	0	8	0	0	0	0	100	500	0
23	9	3	3	0	8	0	0	0	2	80	240	0
24	7	13	13	0	20	0	200	0	20	80	300	0
25	4	5	0	5	15	0	60	0	0	50	180	0
26	3	4	4	0	15	0	600	0	0	50	200	0
27	5	14	14	0	22	0	320	400	35	150	900	0
28	4	1	1	0	0	200	0	0	0	200	1900	0
29	3	5	5	0	10	0	320	0	10	0	0	0
30	3	2	2	0	4	0	0	0	0	60	100	0
31	4	6	0	6	16	0	100	0	5	0	0	0
32	7	3	3	0	3	0	120	0	10	40	100	0
33	14	23	23	0	53	0	960	400	60	1110	3950	200

Inc work/pension	Food Rcd	Food Given	Exp (main foods)	Exp HH items	Exp Inputs	Exp School	ExpHealth	Exp Other	Total cash inc	Total cash exp
1930	50	0	354	150	360	0	35	182	5130	1081
4480	570	0	5184	1387	1460	6650		720	6920	15571
0	0	0	1382	99	620	0	158	3667	3150	5926
70	520	0	8558	1070	260	0	135	2000	1620	12023
1540	50	0	498	738	1330	0	0	1040	2520	3606
220	50	0	130	792	540	50	1200	1130	570	3842
440	200	0	228	290	0	0	770	122	440	1410
10600	50	0	428	840	990	0	330	4198	12400	6786
1520	570	0	186	586	0	0	1602	690	3420	3064
1500	620	0	982	840	0	0	100	2570	1500	4492
8400	50	0	828	2244	1730	1500	200	3500	8400	10002
700	50	0	1068	451	130	0	135	860	1500	2644
300	50	0	1632	545	620	45	280	430	700	3552
30	50	0	651	540	435	0	35	917	430	2578
10	40	0	720	486	130	60	100	1000	2110	2496
0	0	0	466	762	340	0	310	2800	500	4678
1600	50	0	624	826	275	0	150	470	3100	2345
120	0	0	25	324	155	0	0	0	120	504
3090	50	0	379	380	120	1400	130	1400	3990	3809
300	50	0	594	594	140	70	40	813	500	2251
0	570	0	1540	1117	220	0	10	760	6650	3647
13200	370	0	420	430	350	0	0	1380	13700	2580
355	390	0	254	1226	340	1090	300	890	595	4100
220	570	0	24	164	140	0	1200	1400	520	2928
1550	110	0	426	403	250	0	150	1200	1730	2429
900	50	0	176	650	230	0	15	460	1100	1531
550	50	0	324	828	270	0	20	1300	1450	2742
6600	50	0	1936	2334	340	280	1000	5100	8700	10990
230	0	0	0	96	325	70	0	1050	230	1541
540	570	0	384	768	0	0	500	1300	640	2952
24040	50	0	1014	936	350	0	300	2700	24040	5300
290	570	0	490	228	120	0	500	650	390	1988
2640	50	0	491	857	567	0	250	946	6790	3111

Description of variables:

HH No.	-The number of the household
HH Pop	-Population of the household
Fields Total	-Total number of fields owned and sharecropped by the household
Fields (owned)	-Number of fields owned by the household
Fields (shcropd)	-Number of fields sharecropped by the household
Livstk units	-The number of livestock units owned by the household. Different animals were ranked with numbers 1-5 : poultry (1); goat/sheep (2); pig/donkey (3); horse (4); cow/ox (5)
Inc Livstk	-The total income from the sale of livestock and their products over the previous year
Maize (kg)	-The amount of maize in kilogrammes harvested during the last agricultural season
Sorg (kg)	-The amount of sorghum in kilogrammes harvested during the last agricultural season
Beans (kg)	-The amount of beans in kilogrammes harvested during the last agricultural season
Canbs (kg)	-The amount of cannabis in kilogrammes harvested during the last agricultural season
Inc canbs	-The total income (in Maloti) from the sale of cannabis over the last year
Inc other crops	-The total income (in Maloti) from the sale of crops other than cannabis over the last agricultural season
Inc work/pension	-All cash income (in Maloti) to the household over the previous 12-months, including wages, remittances, gifts, pensions and money from casual labour.
Food Rcd	-Amount of kilogrammes of maize received either as a gift, as food aid or from a food-for-work scheme. Other food weights were calculated into their maize equivalent.

Food Given	-Food given, as a gift, by the household to other households.
Exp (main foods)	-The total household expenditure over the preceding year on the main foods
Exp (HH items)	-As above except for household items
Exp Inputs	-As above except for agricultural inputs
Exp School	-The total household expenditure over the preceding year on education related costs such as school fees and uniforms.
Exp Health	-The total household expenditure on health related issues over the preceding year
Exp Other	-The total household expenditure over the preceding year on other items such as transport
Total cash inc	-The total cash income into the household over the previous 12-months
Total cash exp	-The total cash expenditure of the household over the previous 12-months

Appendix IV

C1 = Crop 1; C2 = Crop 2; etc.
S1 = Survey 1 (April 2006); S2 = Survey 2 (December 2006)

Field number	C1 S1	C2 S1	C3 S1	C1 S2	C2 S2	C3 S2	Area (m2)
1	cannabis			cannabis			98.75
2[66]	cannabis			fallow			1582.40
16	cannabis			fallow			365.50
17	cannabis			fallow			709.77
18	cannabis			fallow			798.00
19	cannabis			fallow			35.00
20	cannabis			fallow			3291.45
21	cannabis			fallow			1608.14
22	none			fallow			1994.85
23	none			fallow			711.60
24	cannabis			fallow			1212.00
25	none			none			1091.39
26	none			none			534.80
27	none			none			423.50
28	none			fallow			174.42
29	cannabis			fallow			183.95
30	cannabis			fallow			120.00
31	cannabis			cannabis			135.60
32	cannabis			cannabis			280.10
33	cannabis			cannabis			404.20
34	cannabis			maize	beans		614.60
35	cannabis			maize	beans		343.00
36	cannabis			maize	beans		1005.52
37	cannabis			maize	beans		1460.25
38	cannabis			none			251.18
39	cannabis			none			329.60
40	cannabis			none			333.84
41	cannabis			fallow			132.72
42	cannabis			none			422.12
43	cannabis			cannabis			477.36
44	none			none			922.88
45	cannabis			none			443.30
46	cannabis			none			1071.80
47	none			fallow			1077.12
48	maize			maize	beans	pumpkin	840.00

[66] Fields numbering 3 to 15 were initially recorded but subsequently found not to belong to residents of Botsoapa village. The original field numbers have been maintained, however, as sketch maps and fieldnotes referred to the original numbers. Hence the gap between field number 2 and field number 16. The total number of fields therefore in the village was 422 during the April 2006 survey and 425 during the December 2006 survey, as three new fields had been created in the interval between the two surveys.

49	maize			maize			727.60
50	maize			maize			882.65
51	maize			maize			1053.00
52	cannabis			fallow			861.59
53	cannabis			fallow			1963.60
54	maize			fallow			693.00
55	maize			fallow			1230.00
56	maize			none			1691.00
57	maize			none			1039.50
58	cannabis			fallow			977.90
59	cannabis			fallow			382.95
60	cannabis			fallow			221.26
61	cannabis			maize	sorghum	beans	775.68
62	cannabis			maize	sorghum	beans	567.21
63	cannabis			maize	sorghum	beans	245.23
64	cannabis			fallow			494.84
65	cannabis			fallow			731.70
66	cannabis			fallow			254.40
67	cannabis			fallow			547.20
68	cannabis			none			1818.32
69	cannabis			fallow			1034.10
70	cannabis			fallow			1154.25
71	cannabis			fallow			604.45
72	cannabis			fallow			646.08
73	cannabis	moroho		cannabis	maize		873.60
74	cannabis			fallow			1896.45
75	sorghum			sorghum			602.25
76	sorghum			sorghum			652.09
77	maize			maize			1338.40
78	sorghum			maize			1395.51
79	sorghum			maize			727.12
80	sorghum			maize			756.80
81	cannabis			fallow			310.42
82	cannabis			fallow			1459.45
83	cannabis			fallow			998.40
84	cannabis			fallow			673.40
85	cannabis			fallow			429.64
86	cannabis			fallow			620.91
87	maize			cannabis	maize		1956.60
88	maize			maize			1190.00
89	cannabis			cannabis	maize		2952.00
90	cannabis			cannabis	maize		1025.15
91	maize			cannabis	sorghum		1402.60
92	maize			cannabis	maize		1018.74
93	maize			maize	beans		1875.02
94	cannabis			cannabis			1732.00
95	cannabis			fallow			426.77
96	fallow			fallow			123.00

97	fallow			fallow			700.00
98	cannabis			fallow			560.00
99	cannabis			fallow			488.40
100	cannabis			cannabis			1050.00
101	cannabis			cannabis			1585.50
102	cannabis			cannabis			1384.11
103	fallow			fallow			409.50
104	cannabis			fallow			306.80
105	cannabis			cannabis			518.38
106	cannabis			cannabis			442.50
107	cannabis			cannabis			226.10
108	cannabis			fallow			1370.14
109	maize	beans		fallow			6112.16
110	cannabis			fallow			758.05
111	cannabis			fallow			176.40
112	maize	beans		fallow			781.20
113	maize	beans		none			132.72
114	none			fallow			260.10
115	maize	beans		fallow			465.60
116	cannabis			fallow			701.04
117	cannabis			fallow			131.10
118	cannabis			fallow			222.30
119	cannabis			fallow			571.30
120	sorghum			sorghum			220.00
121	sorghum			sorghum			1242.30
122	sorghum			sorghum			2553.00
123	sorghum			sorghum			3998.40
124	sorghum			sorghum	pumpkin		1133.60
125	cannabis			fallow			306.80
126	cannabis			fallow			723.46
127	maize			fallow			873.60
128	maize			cannabis	maize		1750.70
129	maize			cannabis	maize		5407.28
130	maize			cannabis	maize		2030.16
131	maize			cannabis	sorghum		1303.05
132	maize			fallow			2493.80
133	maize			fallow			2384.59
134	maize			fallow			1843.20
135	maize			fallow			1156.20
136	maize			fallow			1786.40
137	cannabis	maize		fallow			983.25
138	fallow			cannabis			1307.34
139	cannabis			cannabis			558.53
140	cannabis			cannabis			345.84
141	cannabis			cannabis			768.79
142	maize			cannabis			1722.00
143	cannabis			cannabis			664.83
144	cannabis			fallow			1034.64

145	maize			cannabis			1236.60
146	cannabis	maize		fallow			1084.50
147	cannabis			cannabis			2486.24
148	sorghum			cannabis			3131.45
149	cannabis	spaile		cannabis			1064.34
150	cannabis	spaile		fallow			409.99
151	cannabis	spaile		cannabis			306.36
152	cannabis			cannabis			249.21
153	cannabis			cannabis			378.82
154	cannabis	maize		cannabis			1038.40
155	cannabis	maize		fallow			566.10
156	maize			cannabis			318.00
157	cannabis	maize		maize	beans		145.29
158	cannabis	maize		cannabis	maize	pumpkin	328.95
159	cannabis			cannabis			1197.99
160	cannabis	potato		cannabis			648.90
161	rapa			cannabis			725.76
162	rapa			cannabis			538.65
163	maize			fallow			908.02
164	cannabis			fallow			1334.80
165	cannabis	spaile		cannabis			503.94
166	cannabis	maize		cannabis			607.50
167	cannabis			cannabis			184.44
168	cannabis			maize	beans	pumpkin	574.65
169	cannabis			cannabis	beans		2548.00
170	cannabis			fallow			1174.50
171	cannabis			cannabis			446.00
172	cannabis			none			1120.50
173	cannabis			cannabis			380.70
174	maize			maize	beans		333.30
175	maize			maize	beans		299.63
176	maize			maize	beans		450.00
177	maize			maize	beans		360.00
178	maize			cannabis			280.80
179	maize			cannabis			141.30
180	cannabis	spaile		cannabis			723.52
181	cannabis			cannabis			469.06
182	cannabis			cannabis			479.40
183	cannabis			cannabis			525.76
184	cannabis			fallow			796.12
185	cannabis			cannabis			153.26
186	maize			cannabis			114.70
187	maize			maize			714.00
188	maize			cannabis			491.75
189	none			fallow			2288.10
190	none			fallow			156.00
191	cannabis			cannabis			876.90
192	cannabis			cannabis			1312.00

193	cannabis			fallow			942.48
194	cannabis	maize		fallow			1109.42
195	cannabis			cannabis			1358.50
196	cannabis			cannabis			657.36
197	cannabis			cannabis			723.24
198	cannabis			fallow			409.50
199	cannabis			cannabis			2300.55
200	cannabis			cannabis			2287.50
201	cannabis			cannabis			1694.00
202	cannabis			cannabis			745.20
203	maize			maize	beans	pumpkin	794.25
204	maize			fallow			277.99
205	maize			maize			553.50
206	maize			maize			396.94
207	maize			maize			579.88
208	maize			cannabis			592.40
209	maize			fallow			738.92
210	cannabis			fallow			883.23
211	cannabis			fallow			831.25
212	cannabis			cannabis			292.60
213	cannabis			cannabis			897.39
214	cannabis			cannabis			578.76
215	cannabis			cannabis			2114.70
216	cannabis			cannabis			3491.10
217	cannabis			cannabis			2287.44
218	cannabis			cannabis			257.95
219	cannabis			cannabis			1039.70
220	cannabis			fallow			626.22
221	cannabis			fallow			160.00
222	cannabis			fallow			472.50
223	cannabis			fallow			352.00
224	cannabis			cannabis			1872.00
225	sorghum			cannabis			4219.80
226	cannabis			fallow			1144.00
227	sorghum			sorghum			1225.46
228	maize			fallow			979.20
229	maize			fallow			826.70
230	maize			fallow			837.85
231	maize			fallow			1793.00
232	maize			fallow			423.72
233	cannabis			cannabis			618.30
234	maize			maize			1322.64
235	maize			maize			2214.30
236	cannabis			fallow			1295.40
237	sorghum			fallow			1828.80
238	sorghum			sorghum			1414.00
239	sorghum			sorghum			1160.50
240	sorghum			sorghum			73.80

241	sorghum			sorghum			1898.80
242	sorghum			sorghum			1140.75
243	maize			maize			469.89
244	maize			maize			690.15
245	maize			maize			617.12
246	maize			maize			494.40
247	maize			maize			282.00
248	maize			maize			689.00
249	sorghum			maize			478.47
250	cannabis	sorghum		maize			462.00
251	sorghum			maize			188.15
252	cannabis			maize			278.40
253	cannabis			fallow			511.20
254	cannabis			fallow			988.00
255	maize			maize			2959.14
256	fallow			fallow			774.20
257	fallow			fallow			334.80
258	fallow			fallow			435.16
259	fallow			fallow			1081.74
260	maize			sorghum			5445.18
261	maize	sugarcane		maize	beans		619.85
262	maize			maize	beans		428.84
263	cannabis			cannabis	maize		1430.40
264	maize			cannabis	maize		794.25
265	cannabis	maize		maize	beans	pumpkin	319.78
266	cannabis	maize		maize	beans	pumpkin	719.80
267	cannabis			none			278.96
268	maize			maize	beans		288.00
269	maize			maize	beans		603.57
270	moroho			cannabis			1382.25
271	maize			fallow			636.76
272	maize			fallow			1118.79
273	cannabis			cannabis			973.50
274	maize			fallow			285.35
275	maize			fallow			1162.61
276	maize			fallow			834.40
277	maize			fallow			1469.00
278	maize			fallow			780.80
279	cannabis			fallow			688.60
280	cannabis			fallow			760.10
281	cannabis			fallow			1161.80
282	cannabis			fallow			735.08
283	cannabis			fallow			775.59
284	cannabis			fallow			569.91
285	fallow			fallow			952.81
286	fallow			fallow			514.08
287	fallow			fallow			510.39
288	fallow			fallow			666.12

289	fallow			fallow			506.94
290	cannabis			fallow			249.21
291	cannabis			fallow			106.26
292	cannabis			fallow			311.43
293	maize			sorghum	beans	pumpkin	1388.80
294	maize			sorghum	beans	pumpkin	1226.00
295	maize			none			999.00
296	maize			none			1794.50
297	maize			none			1556.08
298	cannabis			maize			548.63
299	cannabis			maize			562.40
300	cannabis			maize			1806.20
301	cannabis			maize	beans		2250.00
302	cannabis			fallow			1209.60
303	fallow			none			400.50
304	none			none			933.28
305	fallow			none			774.20
306	fallow			none			942.20
307	fallow			none			786.50
308	fallow			none			708.40
309	fallow			none			881.96
310	cannabis			none			849.96
311	fallow			none			157.95
312	cannabis			cannabis			1329.50
313	sorghum			none			1801.89
314	sorghum			fallow			735.75
315	sorghum			fallow			1361.58
316	sorghum			fallow			781.54
317	maize	beans	pumpkin	fallow			406.78
318	maize	beans	pumpkin	fallow			708.83
319	maize	beans	pumpkin	cannabis	maize	beans	3993.45
320	maize	beans	pumpkin	cannabis	maize	beans	2279.76
321	maize	beans	pumpkin	cannabis	maize	beans	1619.16
322	maize	beans	pumpkin	sorghum	beans	pumpkin	1733.04
323	sorghum			sorghum	beans	pumpkin	2199.63
324	sorghum			sorghum	beans	pumpkin	3048.48
325	sorghum			sorghum	beans	pumpkin	2067.21
326	maize			sorghum	beans	pumpkin	1436.50
327	maize			sorghum	beans	pumpkin	212.50
328	maize			sorghum	beans	pumpkin	440.00
329	maize			sorghum	beans	pumpkin	468.00
330	cannabis			none			391.77
331	maize			fallow			219.00
332	cannabis			fallow			106.60
333	fallow			fallow			156.55
334	fallow			fallow			333.96
335	fallow			sorghum	beans		1862.00
336	fallow			sorghum	beans		990.51

337	fallow			sorghum	beans		959.90
338	fallow			cannabis			461.84
339	maize			maize	beans	pumpkin	1668.11
340	maize			maize	beans	pumpkin	90.12
341	maize			maize	beans	pumpkin	883.50
342	cannabis			beans			127.25
343	maize			maize	beans	pumpkin	990.00
344	maize			none			1882.50
345	maize			wheat			1480.50
346	maize			wheat			307.50
347	maize			none			1227.05
348	maize			fallow			1290.00
349	maize			fallow			819.72
350	fallow			maize	beans		327.36
351	fallow			maize	beans		676.00
352	fallow			maize	beans		603.91
353	fallow			fallow			168.00
354	maize			maize	sorghum	beans	950.30
355	maize			maize	pumpkin		380.24
356	maize			maize	pumpkin		86.84
357	maize			maize	pumpkin		196.00
358	maize			maize	pumpkin		105.12
359	maize			maize	beans		1026.20
360	maize			maize	beans		778.80
361	maize			maize	beans		710.85
362	maize			maize	beans		728.40
363	maize			maize	beans		594.50
364	maize			maize	beans		279.34
365	cannabis			cannabis			441.15
366	cannabis			cannabis			470.40
367	maize			maize			916.25
368	maize			maize			1047.15
369	maize			maize			556.20
370	maize			maize			390.32
371	maize			sorghum			506.10
372	maize			sorghum			1314.12
373	maize			maize	beans		1311.00
374	maize			maize	beans		1147.00
375	maize			maize	beans		901.70
376	maize			maize	beans		536.00
377	maize			maize			3537.72
378	maize			maize			3987.09
379	maize			cannabis			1495.60
380	maize			maize	beans		1709.16
381	maize			maize	beans		1344.12
382	maize			sorghum	beans		1498.00
383	maize			maize			740.00
384	maize			maize			787.55

385	maize			maize			863.50
386	maize			maize			1271.55
387	maize			maize			774.40
388	maize			maize			1460.20
389	maize			maize			1260.00
390	maize			maize			1878.25
391	fallow			maize			900.90
392	maize			maize			1028.36
393	maize			maize			1380.00
394	cannabis			fallow			1213.60
395	cannabis			fallow			979.71
396	cannabis			fallow			175.68
397	cannabis			cannabis			1365.48
398	cannabis			fallow			500.80
399	maize			fallow			633.25
400	maize			fallow			372.00
401	maize			fallow			761.40
402	maize			fallow			2164.48
403	cannabis			sorghum			789.00
404	fallow			fallow			387.24
405	fallow			fallow			413.25
406	fallow			fallow			1403.82
407	cannabis			fallow			748.50
408	cannabis			fallow			553.11
409	cannabis			fallow			717.55
410	cannabis			fallow			1287.23
411	cannabis			fallow			760.33
412	cannabis			cannabis			257.24
413	cannabis			maize	beans		314.30
414	cannabis			maize	beans		435.23
415	cannabis			maize	beans		790.05
416	cannabis			maize	beans		576.30
417	cannabis			maize	beans		718.20
418	cannabis			maize	beans		839.70
419	cannabis			maize	beans		227.70
420	cannabis			maize	beans		200.64
421	cannabis			cannabis			613.32
422	fallow			cannabis			359.02
423	cannabis	maize		cannabis			73.00
424	maize	beans		fallow			345.00
425	maize	beans		fallow			608.58
426	maize	beans		fallow			2410.87
427	fallow			fallow			946.57
428	fallow			fallow			343.53
429	fallow			fallow			233.20
430	cannabis			fallow			216.46
431	cannabis			cannabis			195.84
432	cannabis			fallow			683.62

433	cannabis			fallow			325.65
434	cannabis			fallow			163.61
435[67]				cannabis			630.00
436				cannabis			1003.00
437				cannabis			1060.80

[67] Fields No.435-437 are the three new fields that were created in the interval between the two surveys.

Appendix V

Whole dried plant samples weighed:

Plant sample #	Weight (kgs)
1	0.00900
2	0.00350
3	0.00456
4	0.01933
5	0.01349
6	0.04398
7	0.03730
8	0.03204
9	0.00706
10	0.04570
11	0.01500
12	0.00897
13	0.02559
14	0.00240
15	0.01696
16	0.00670
17	0.01965
18	0.01353
19	0.00395
20	0.00525
21	0.02550
22	0.02081
23	0.01123
24	0.00620
25	0.01256
Average	0.01641

Plant density measurements:

Field number	Square 1	Square 2	Square 3	Square 4	Square 5	Average
21	37	28	29	31	33	33
118	24	27	26	30	29	27.2
166	37	40	32	38	19	33.2
253	35	27	45	36	41	36.8
394	28	27	34	33	31	30.6
Average						31.88

Appendix VI

Police record charges relating to cannabis possession between January and November 2006 at Mapoteng police station, Berea district.

Court Record	Charge Record #	Quantity	Weight (kg)	Fine (Maloti)	Prison (months)
19/06	25/01/06	3.5 bags	119.00	2000.00	24
30/06	42/01/06	1 bag	10.12	100.00	2
31/06	41/01/06	1 bag	10.00	100.00	2
93/06	67/02/06			800.00	6
108/06	08/03/06	4.50	31.00	500.00	3
119/06	40/03/06			1000.00	12
	48/03/06	12 bags	167.60	Pending	
	90/03/06		0.81		2
148/06	14/04/06	1 bag	2.88	200.00	6
154/06	25/04/06	1 bag	8.20	800.00	12
	33/04/06	12 bags		Pending	
168/06	38/04/06	2.5 bags	22.12	300.00	6
169/06	39/04/06	3 bags	48.52	700.00	12
171/06	46/04/06	5.5 bags	72.00	1000.00	12
177/06	54/04/06	1 bag	13.56	700.00	6
190/06	70/04/06	1 bag	3.30	500.00	6
218/06	13/05/06	25 packets	28.90	500.00	2
278/06	50/06/06	4 packets	13.20	500.00	6
281/06	56/06/06	1 bag	13.90	100.00	
	61/07/06	14 bags	233.80	1000.00	12
367/06	51/08/06	14 bags	323.80	2000.00	24
366/06	64/08/06	1 bag	4.30		
		seeds	11.80	1000.00	12
	28/09/06	.5 bag		Pending	
	40/09/06	2 bags		Pending	
417/06	61/09/06	2 bags	42.30	300.00	3
		.5 bag seeds			
	11/10/06		58.50	Pending	
	32/11/06	16 bags		Pending	
TOTAL			**1239.61**		

Appendix VII

SAPS cannabis seizures in the eastern Free State between April 2005 and March 2006 (kilogrammes).

	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05
Oewetsdorp	155.45	212.85	332.55	0.00	0.00	211.44
Wepener	23.43	48.32	18.57	113.71	0.00	52.68
Zastron	160.00	255.65	0.00	15.87	0.00	0.00
Van Stadensrus	0.00	22.00	0.00	0.00	0.00	12.00
Clocolan	35.19	293.01	165.52	1764.54	0.20	1.90
Clarens	1.00	261.15	0.00	0.00	186.10	2.70
Hobhouse	1.29	0.00	2.16	74.45	0.00	0.00
Fouriesburg	330.10	58.90	604.00	82.00	310.00	374.90
Phutaditjhaba	5.65	2.39	317.06	2.77	4.61	0.25
Ladybrand	951.36	706.94	957.58	504.44	366.06	314.66
Ficksburg	2808.37	1273.45	2827.18	2007.46	1040.05	3965.13
Total	4471.84	3134.66	5224.62	4565.24	1907.02	4935.66

	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06
Oewetsdorp	0.00	211.62	0.00	212.62	299.15	0.00
Wepener	0.00	46.30	286.54	1.50	15.00	5.11
Zastron	123.91	19.52	2.63	20.27	760.81	113.01
Van Stadensrus	0.01	3.00	18.08	0.00	21.99	0.00
Clocolan	105.80	166.61	68.83	72.15	291.82	98.84
Clarens	0.00	440.55	5.42	0.00	223.90	1239.65
Hobhouse	0.00	0.00	0.00	0.10	135.00	93.28
Fouriesburg	105.31	175.64	567.80	778.48	389.55	366.70
Phutaditjhaba	6.09	40.39	18.15	4.46	3.53	5.33
Ladybrand	58.82	435.90	489.56	2118.01	759.86	312.68
Ficksburg	770.58	1573.24	848.01	2296.05	2450.95	9784.68
Total	1170.52	3112.77	2305.02	5503.64	5351.56	12019.28

SAPS cannabis seizures in the Eastern Free State April 2005 – March 2006 (South African Rand):

	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06
Oewetsdorp	0.00	275,100.00	0.00	276,410.00	388,858.50	0.00
Wepener	0.00	60,183.00	372,495.50	1,950.00	56,459.00	6,643.00
Zastron	206,310.00	25,376.00	3,412.50	26,858.00	989,047.00	147,069.00
Van Stadensrus	2.60	3,900.00	23,504.00	0.00	28,587.00	0.00
Clocolan	104,972.00	166,376.00	68,650.00	70,134.00	291,820.00	98,840.00
Clarens	0.00	440,550.00	6,042.00	0.00	223,202.00	1,239,650.00
Hobhouse	0.00	0.00	0.00	100.00	135,000.00	93,280.00
Fouriesburg	105,310.00	175,640.00	567,800.00	778,278.00	389,055.00	366,502.00
Phuthadithhaba	5,408.00	20,800.00	13,977.00	903.00	1,485.00	3,170.00
Ladybrand	587,373.00	435,900.00	489,362.00	2,115,265.00	759,860.00	312,680.00
Ficksburg	769,230.00	1,572,925.00	846,966.00	2,295,645.00	2,436,658.00	9,784,450.00
Total	1,778,605.60	3,176,750.00	2,392,209.00	5,565,543.00	5,700,031.50	12,052,284.00

	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05
Oewetsdorp	201,796.00	276,705.00	432,308.50	0.00	0.00	274,770.00
Wepener	30,450.00	62,809.00	24,141.00	147,823.00	0.00	68,482.70
Zastron	208,000.00	332,345.00	0.00	20,631.00	0.00	0.00
Van Stadensrus	0.00	28,600.00	0.00	0.00	0.00	15,600.00
Clocolan	35,010.00	292,645.00	164,804.00	1,764,315.00	11.00	1,360.00
Clarens	1,000.00	261,150.00	0.00	0.00	186,100.00	2,160.00
Hobhouse	840.00	0.00	2,070.00	74,450.00	0.00	0.00
Fouriesburg	329,830.00	58,900.00	604,000.00	82,000.00	310,000.00	374,900.00
Phuthadithhaba	4,408.00	1,395.00	317,057.00	368.00	2,574.00	25.00
Ladybrand	950,511.00	706,223.00	957,577.00	504,438.00	365,240.50	314,250.00
Ficksburg	2,808,010.00	1,272,055.00	1,806,910.00	2,000,440.00	1,039,780.00	3,964,230.00
Total	4,569,855.00	3,292,827.00	4,308,867.50	4,594,465.00	1,903,705.50	5,015,777.70

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