

**A COMMUNITY-BASED CONSERVATION PROGRAMME
FOR THE MANAGEMENT AND CONSERVATION OF
LAND RESOURCES IN LESOTHO**

by

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CERTIFICATE

I declare that the thesis hereby submitted by me for the doctor of philosophy degree at the University of the Free State is my own independent work and has not previously been submitted by me at another University. I further more cede copyright of the thesis in favour of the University of the Free State.

Akinagum Fidelis Esenjor

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November 2004

DEDICATION

This work is dedicated to: my late father and mother:

Esenjor Ochien

and

? kawena (Okiba-ali) Rebecca Owoyi Esenjor

and to those whose means of livelihood have been rendered unsustainable as a result of land degradation phenomenon and the attendant official conservation practices.

ABSTRACT

Literature abounds with discussions regarding land degradation and the sustainability of land resources conservation programmes in sub-Saharan Africa. A thorough understanding of past and present intervention mechanisms and the consequences both to humans and to the entire ecosystem is necessary to advise stakeholders in conservation initiatives. This study employs comprehensive multiple participatory methodologies in analysing both the causes of land degradation and the importance of local communities' real involvement in land resources conservation initiatives. The participatory methodologies include focus group discussions.

The consequences of the paternalist classical model of land resources conservation programmes practised in the developing countries include endless conflicts between conservation officers and local communities, a lack of unequivocal acknowledgement of indigenous knowledge, denial to local communities of access to rights and adequate benefits, and a lack of local support and community participation which results in the sudden collapse and abandonment of conservation programmes. This indicates a wasting of government agencies' heavy investment in conservation initiatives.

Yet, worldwide advocacy of a shift from official to community-based conservation approaches does not mean the total withdrawal of government agencies. It only means a trimming down of government agencies' "do it all" recurrent roles to one of facilitation of the conservation initiatives of local communities. Government agencies may also give unconditional support in community-based initiatives.

It has been established that the continuous occupation of the centre stage in land resources conservation programmes by government agencies has accelerated land degradation, has intensified conflicts between government officers and local communities, has wasted local available resources input, has denied local communities

access, rights and benefits of land resources, and has increased the number of abandoned conservation projects.

The hope of effectively practising real community-based land resources is an uphill task. This is so because government agencies operating in Lesotho have raised unsustainable expectations of food-for-work and/or cash payment incentives to local community members for participating in conservation work. This poor practice has established a false impression that land resources conservation is the sole responsibility of government agencies.

This study has established that to practise community-based conservation would require drastic new training of government agencies; it would necessitate providing more sustainable incentives to local communities, and also re-orientating, empowering and capacitating the people for the challenging tasks ahead. Real involvement of local communities in the processes of identification of conservation needs, planning, implementation, monitoring and evaluation are sure ways of ensuring sustainable land resources conservation programmes.

OPSOMMING

Daar is volop literatuur oor grondverval en die volhoubaarheid van programme vir grondhulpbronbewaring in Sub-Sahara Afrika. 'n Grondige begrip van intervensiemeganismes van die verlede en hede, asook van die gevolge vir sowel die mens as die totale ekosisteem, is noodsaaklik ten einde belanghebbendes ten opsigte van bewaringsinisiatiewe te adviseer. In hierdie studie word omvattende meervoudige deelnemende metodologieë aangewend om sowel die oorsake van grondverval as die belangrikheid van plaaslike gemeenskappe se werklike betrokkenheid in grondhulpbroninisiatiewe te ontleed. Die deelnemende metodologieë sluit fokusgroepbesprekings in.

Die gevolge van die paternalistiese klassieke model van grondhulpbronbewaringsprogramme wat in ontwikkelende lande bedryf word, omvat eindelose konflikte tussen bewaringsamptenare en plaaslike gemeenskappe, 'n gebrek aan 'n ondubbelsinnige erkenning van inheemse kennis, 'n ontkenning van plaaslike gemeenskappe se reg tot toegang en voldoende voordele, asook 'n gebrek aan plaaslike ondersteuning en gemeenskapsdeelname wat daartoe aanleiding gee dat bewaringsprogramme skielik in duie stort of laat vaar word. Dit dui op 'n vermorsing van staatsagentskappe se dure belegging in bewaringsinisiatiewe.

Die globale voorspraak vir 'n verskuiwing van amptelike na gemeenskapsgebaseerde bewaringsbenaderings beteken egter nie die totale onttrekking van staatsagentskappe nie. Dit beteken net 'n afskaling van staatsagentskappe se herhaalde 'ons-doen-alles' rolle na 'n situasie waarin die bewaringsinisiatiewe van plaaslike gemeenskappe gefasiliteer word. Staatsagentskappe kan egter ook onvoorwaardelike ondersteuning aan gemeenskapsgebaseerde inisiatiewe gee.

Daar is bewyse dat die sentrale rol van staatsagentskappe in grondhulpbronprogramme daartoe bygedra het om grondverval te laat versnel. Dit het ook die konflik tussen staatsamptenare en plaaslike gemeenskappe verskerp; dit het gelei tot 'n vermorsing van plaaslik beskikbare hulpbroninsette; dit het plaaslike gemeenskappe ontnem van die toegang, regte en voordele van grondhulpbronne; en dit het die aantal bewaringsprojekte wat laat vaar is, laat toeneem.

Die moontlikheid om werklike gemeenskapsgebaseerde grondhulpbronne doeltreffend toe te pas, is geen maklike taak nie. Dit is die geval omdat staatsagentskappe in Lesotho nie-volhoubare verwagtinge geskep het ten opsigte van kos-vir-werk en/of kontantinsentiewe aan plaaslike gemeenskappe vir deelname aan bewaringswerk nie. Hierdie swak praktyk het 'n valse indruk geskep dat grondhulpbronbewaring die alleen-verantwoordelikheid van staatsagentskappe is.

In hierdie studie is vasgestel dat om gemeenskapsgebaseerde bewaring te beoefen, 'n ingrypende nuwe opleiding van staatsagentskappe vereis; dit vereis ook dat meer volhoubare insentiewe aan plaaslike gemeenskappe voorsien sal word; en dat die gemeenskap geheroriënteer, bemagtig en instaatgestel word ten opsigte van die uitdagings hieromtrent. Slegs die werklike betrokkenheid van plaaslike gemeenskappe in die identifisering, beplanning, implementering, monitering en evaluering van bewaringsbehoefte sal volhoubare grondhulpbronbewaringsprogramme verseker.

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ABBREVIATIONS AND ACRONYMS

BBC	:	British Broadcasting Corporation
BPK	:	Bestuurplankomitee
BNP	:	Basotho National Party
CAP	:	Conservation Area Plan
CAMPFIRE	:	Communal Area Management Programme for Indigenous Resources
CBC	:	Community-Based Conservation
CBO	:	Community-Based Organisation
CCR	:	Community-Controlled Research
CF	:	Community Forum
CMBSL	:	Conservation of Mountain Biodiversity of Southern Lesotho
CSF	:	Community Social Forestry
DACO	:	District Agriculture Conservation Officer

DDC	:	District Development Council
DPAP	:	Drought Prone Area Programme
EE	:	Environmental Economist
EIA	:	Environmental Impact Assessment
EMPR	:	Environmental Management for Poverty Reduction
FAO	:	Food and Agricultural Organisation
FISC	:	Farm Improvement with Soil Conservation
GEF	:	Global Environmental Fund
GIS	:	Geographic Information System
GGD	:	Global Green Deal
GoL	:	Government of Lesotho
GTZ	:	Gesellschaft Für Technische Zusammenarbeit
IBP	:	International Biological Programme
IEM	:	Integrated Ecosystem Management
IFAD	:	International Fund for Agricultural Development
IHD	:	International Hydrological Decade
IUCN	:	International Union for Conservation of Nature and Natural Resources
Km ²	:	Square Kilometres
LBS	:	Lesotho Bureau of Statistics
LCD	:	Lesotho Congress for Democracy
LCK	:	Local Community Knowledge
LHDA	:	Lesotho Highlands Development Authority
LFCD	:	Lesotho Fund for Community Development
LHWP	:	Lesotho Highlands Water Project
LNDC	:	Lesotho National Development Cooperation
LPD	:	Lesotho Population Datasheet
LWP	:	Lesotho Woodlot Project
MHA	:	Metre Per Halter
MP	:	Member of Parliament
MoA	:	Ministry of Agriculture

M&E	:	Monitoring and Evaluation
NASA	:	National Aeronautics and Space Administration
NRDP	:	National Rural Development Programme
NES	:	National Environment Secretariat
NGO	:	Non-Governmental Organisation
PMAC	:	Park Management Advisory Committee
PRA	:	Participatory Rural Appraisal
PTC	:	Production Through Conservation
RS	:	Remote Sensing
SADC	:	Southern African Development Community
SAP	:	Structural Adjustment Programme
SES	:	Soil Erosion Service
SSA	:	Sub-Saharan Africa
UF	:	User-Fees
UN	:	United Nations
UNCED	:	United Nations Conference for Environment and Development
UNCHS	:	United Nations Centre for Human Settlements
UNCOD	:	United National Conference on Conservation
UNDP	:	United Nations Development Programme
UNEP	:	United Nations Environmental Programme
UNESCO	:	United Nations, Educational, Scientific and Cultural Organisation
UNNGLS	:	United Nations Non-governmental Liaison Service
VDC	:	Village Development Committees
WC	:	Ward Chief
WCED	:	World Commission on Environment and Development
WCS	:	World Conservation Strategy
WDID	:	World Development Indicators Database
WHO	:	World Health Organisation
WPD	:	World Population Datasheet
WWF	:	World Wildlife Fund

CHAPTER ONE

PROBLEM STATEMENT AND METHODOLOGICAL APPROACH

1. BACKGROUND

All over the world, it is now being realised that land resources have limited regenerative capacities and that humans are exceeding those capacities. It is also being realised that human action in future will determine whether we take a road towards a chaotic future, characterised by over exploitation and total abuse of land resources, or take the opposite road towards maintaining greater biological diversity and managing them (IUCN & WWF, 1990:11; UNEP, *et al.*, 1998:15). The past and present interventions in the utilisation and manipulation of land resources are currently having unanticipated consequences. As a result of these interventions, Yeld (1994) opines that the world's forests have shrunk by nearly 200 million hectares and that the deserts have expanded by about 120 million hectares. Billions of tons of valuable topsoil have been washed away, while hundreds of species of plants and animals have become extinct. Human-induced degradation worldwide today contributes more to land degradation and this has already affected 1 966 million ha or 15% of the total land area. Deforestation, which has been the most destructive causative factor, is assumed to be responsible for 43%, while overgrazing and agricultural mismanagement account for 29% and 24% respectively, of land degradation (Oldeman, 1994:99; UNEP, 2000). It has been noted that Africa's land surface is under threat of desertification and that on the southern edge of the Sahara, some 650 000km² of once productive lands have become desert, while between 50 000km² to 70 000km² go out of production every year due to land degradation (FAO, 1993 & 1999).

In Table 1 below, FAO (1999) provides more detailed statistical information on the severity of land degradation in sub-Saharan Africa.

Table: 1 Severity of land degradation in sub-Saharan Africa

Nature of degradation	Land area (000 km ²)	%
No Degradation	6 809	33
Light	5 715	24
Moderate	4 186	18
Severe	3 472	15
Very severe	2 460	10
Total land area	23 757	100

Source: FAO (1999)

The above table shows that only 33% of sub-Saharan African lands are not degraded. This means that 67% of the land areas are in the process of degradation, though to varying degrees ranging between light to very severe.

The statistics presented by Yeld (1994), FAO (1993 & 1999) and Oldeman (1994) on land degradation are not all that current, yet the confirmation of the same statistics by UNEP (2000) attests to the fact that the rate of land degradation has not dropped in recent times. To date, no report has given any indication that land degradation has decreased sharply in the recent past. In fact, as the world approaches a point where it may not be able to meet the demands of its population for land resources, the situation in sub-Saharan Africa is, to say the least, doubly bleak, especially as the population of Africa is expected to double over the next century (World Bank, 2002). However, there are views which suggest that the extent of land degradation has been over-estimated. Whether this viewpoint has a case to prove or not, sub-Saharan African countries remain good examples of countries whose lands are either heavily or moderately degraded.

It is also important to mention that governments of developing countries have, from available studies as reviewed in Chapter Three and Chapter Four, employed mainly conventional approaches to tackle the accelerated land degradation problems. As a result of this, only a few of such attempts have been successful. The number of unsuccessful

and abandoned conservation projects and the conflicts that sometimes becloud these attempts are clear evidence to prove the indisputable fact that ¹conventional approaches can no longer work (see Bhatt, 1998; Borotho, 1998; Ghimire, 1994; Ghimire & Pimbert, 1997; Hulme & Kelly, 1994; Isaac & Mohammed, 2002; Oldeman, 1994; Schafer & Bell, 2002; Stocking & Garland, 1998; UNEP, 2000; Whiteside, 1998; Yeld, 1994).

The above general remarks have provided some indication of the current status of land degradation and of the conservation management strategies employed by government agencies. The following sub-section discusses some consequences of the conventional approaches to conservation programmes of governments and other agencies and how these inform the need for an alternative approach to land resources conservation in the developing nations of the world in general, and of Africa in particular.

1.1 Pitfalls of conventional approaches to land resources conservation programmes

Environmentalists have described a specific attitude taken towards conservation of land resources as a “paternalist classical” model. This model exhibits top-down approaches where conservation problems are identified and solutions formulated by means of a top-down conservation formula (Stocking & Garland, 1998:30).

These writers further note that attempts to conserve land resources and rehabilitate degraded lands have proved that the methods often employed by government agencies are not efficient for these tasks. One of the reasons has been that government-initiated land resources conservation programmes have emphasised the use of top-down approaches, modern technologies and practices. Ironically, local communities in most developing countries have in-depth conservation knowledge informed by their long-standing experience in land resources conservation.

¹ In this study conventional approaches to conservation of land resources referred to are those official ways of carrying out conservation programmes. These approaches relegate local communities who are in most cases, the host and immediate beneficiaries of land resources conservation programmes to accepting and carrying out conservation dictates of governments and other agencies.

However, despite this fact, the local communities' knowledge² and conservation practices in the developing countries have not unequivocally been acknowledged by government conservation programmes/projects as being of equal importance and relevance to conservation and management of land resources practices (see Cock & Fig, 2000; Kothari, Anuradha & Palthak, 1998; Stocking & Garland, 1998). Cock & Fig (2000) concur that the pool of indigenous knowledge on conservation has been largely ignored in both official policy and professional understanding of conservation practices.

According to Kothari, Anuradha & Palthak (1998) the neglect of indigenous knowledge is an indication of the devaluation of traditional conservation knowledge and practices by modern and official knowledge. This, as noted earlier, is the bane of the conventional approach to land resources conservation.

Experience has shown that attempts to exclude communities have resulted in severe conflicts between conservation project officers and community members, to the extent that members of various communities are even eager to work against the success of government conservation measures projects (MoA, 1988; Yeld, 1994). The fact that numerous land resources conservation projects in developing nations fizzled out when the sponsors' time elapsed, indicates the extent to which community members are excluded. A review of environmental management and land resources conservation projects of some developing countries confirms the trend. An example of these is the mid-1980 research of 222 Protected Areas Survey (PAS) in India, which revealed that at least 47 or 21.17% involved physical clashes between community members and forest officers. In some other areas of India, people demanded de-reservation of protected areas status because they perceived that land resources, which they needed for survival and the habitats they held culturally valuable, were being threatened.

On the other hand, it is also on record that communities have played and still continue to play important roles in the attempt to conserve land resources. The mining activities in

² Local knowledge, indigenous knowledge and traditional conservation knowledge used in this study simply refer to the local communities' conservation measures based on traditional know-how, local traditions, available materials and technologies, skills and expertise, local traditions and commitment.

the Sariska Tiger Reserve in India destroyed the forest around the mining areas and the local people fought the miners through legal actions and persistent agitation against mining in the area (Kothari, Anuradha & Palthak, 1998).

In some cases it is the government that is the culprit. For instance, the exploration and exploitation of oil reserves in the Nigeria Niger Delta Region, which has resulted in severe environmental damage, has remained a source of conflict between the Niger Delta communities and the oil companies backed by the Federal Nigerian government. The Nigerian government is cracking down on people's protests and the worst hit communities have been zoned off as national security areas. Above all, the governments label environmental-minded persons, who have tried to canvass for sustainable use of the available resources and for conservation of the environments, as "unpatriotic" (UNNGLS, 2000). The cases of the grabbing of the Karural and Ogwek forests in Kenya of 1999 and 2000, respectively, by the Kenya government, and Zimbabwe land grabbing also reveal that governments can actually be an impediment to land resources conservation. Furthermore, the British Broadcasting Corporation (BBC) Network News, from 1999 till date has extensively aired the opinion that political support for conservation is actually declining in many developing/African countries. This tendency by governments to pursue development without concern for its environmental consequences is very common in the corridors of power.

Another pitfall of the conventional approach to land resources conservation is that while the local communities pay the major cost of land resources conservation activities (loss of access to land resources, etc the benefits accrue mainly to people not belonging to such communities. Cock & Fig (2000), Ghimire & Pimbert (1997), Issac & Mohammed (2002) and Pimbert & Pretty (1998), Yeld (1994) furthermore, agree that conservation of land resources has for some time been practised in an autocratic manner which ignores the interests and feelings of many local communities. This has created recurrent bitterness and suspicion amongst conservation agencies. Put together, the foregoing instances of autocratic management, horizontal distribution of benefits, complete

disregard for host communities and the devaluation of indigenous knowledge, result in conflicts and eventual failures of land resources conservation projects in developing nations. These problems have, in the past two decades, given way to a 'neo-classical' model where conservation problems are identified and the solutions are designed with great concern for incentives that will induce land users to change practices in, and their attitudes towards land resources conservation (Stocking & Garland 1998). This shift in approach has further exacerbated the need to establish an acceptable and workable approach to land resources conservation. The next part of this chapter focuses on community-centred conservation approach.

1.2 Community-centred conservation approach

The shift from conventional conservation to community-centred approaches has its roots in the emergence of discourses on sustainable development, popular participation in public policies, market-based incentives for land resources conservation, and the need to extend conservation beyond protected areas. That there are other contributing factors is acknowledged by Adams & Hulme, (1998); Cock & Fig, (2000); Mohammed, (2001) and Stocking & Garland, (1998). The above writers have described this shift as a move away from the colonial model of resource preservation to an indigenous, community-centred model which focuses on community benefits and sustainability of land resources conservation projects.

At the international level, the United Nations Conference has designed a number of conservation instruments for Environment and Development. These instruments include Agenda 21 (the Blueprint and Action Plan for Conservation and Sustainable Development), the Rio Declaration, and the Convention on Biological Diversity, all of 1992. The outcome of the recent 2002 Summit on Sustainable Development held in South Africa also recognised the special status of local communities, and the local people's desires to be involved in the management of land resources. These instruments confirm that sustaining land resources can no longer be the sole responsibility of governments; rather, the people should have some stake in them. Some studies of such scholars as

Barrow, (1995); Borotho, (1998); Botes & Van Ransburg, (2000); Cock & Fig, (2000); Ghimire, (1994); Harvey, (1996); O’Riordan, (1995); Schafer & Bell, (2000); Schreber & Hill, (1994); Songorwa, (1999); Ts’oene, (1995) and Yeld, (1994 & 1997) have expressed the views that peoples’ initiative, knowledge, capacity and boutique of traditional technologies should be utilised in the process of sustaining land resources conservation.

Experience has shown that indigenous knowledge can be extremely useful in land resources conservation. Indeed, some of these writers emphasise that local peoples’ day-to-day interaction and dependence on land resources put them at the forefront of any protest against land degradation caused by outsiders. The World Bank (1995) presents compelling evidence that community participation can, in many circumstances, improve the quality, effectiveness and sustainability of any conservation project and also strengthen ownership. Meanwhile, there is clear evidence that points towards better sustainability of conservation projects at lower costs of material and resource mobilisation than the conventional command and control approaches. Above all, local experiences in social organisation and capacity according to Schreber & Hill (1994) are central to community involvement. Given the above analysis, it is suggested that it will be through local initiative that the efforts towards land resources conservation by government, inter-governmental and international organisations can be sustained. Barkham (1995), Bhatt (1998), and Cock & Fig (2000) agree that involving local communities will be a unique attempt to harmonise land resources conservation with the interests of rural people. In fact, it is a matter of fundamental human rights and social justice that the ideal type of management should be through participatory conservation models. Consequently, this will have important implications for mobilising indigenous knowledge in support of conservation since the future of land resources conservation lies in obtaining the cooperation, understanding and participation of the local people, as expressed by Adams & Mcshane, (1996) and UNEP, (2000).

Yet, there are allegations, firstly, that land users have often been considered to be part of

the problem rather than part of a potential solution to land degradation. Secondly, that land users are paid or forced to participate in conservation projects carried out by governments. Thirdly, that land users have often not understood the government schemes, and are far too concerned with the daily struggle to produce enough food to eat, to pay their debts and meet other commitments, to be interested in conservation schemes. Ghimire (1994) states that these allegations are debatable because they are designed to cover for lack of community involvement in the management of land resources conservation programmes. The truth is that experience in Africa has proved that large-scale, autocratic, and top-down government-run programmes in treating land degradation are seldom successful (Mohammed 2001; Stocking & Garland 1998).

The concept of conservation and management of land resources needs to be re-examined. Innovative alternatives to conserving land resources need to be implemented. In this regard, the study supports many advocates of participatory management who suggest the need to take local communities into consideration when planning for land resources conservation. There are different approaches available for testing. However, it is important to note that what may work well in one community or region may fail in another. This, therefore, means that management plans have to be site-specific while making attempts to motivate local communities to conserve instead of adopting an approach which alienates local communities (Bhatt, 1998). The approach that puts the government at the forefront and at centre stage disregards indigenous knowledge. The community-centred approach takes into account most of a particular community's interests, and puts stakeholders at the forefront for effective joint-management schemes. The study also seeks to support the practice of the idea of marrying indigenous with scientific knowledge, so as to achieve sustainable management and conservation of land resources.

The foundation for further discussions, having been laid, there is a need at this stage to stress that the emphasis on community-centred conservation does not mean that government agencies and other external institutions and corporate bodies shall have no

role to play. Rather, it is one of the challenges of this study to find ways of allocating roles to all stakeholders in order to ensure full and democratic participation in the process. The realisation of this goal may require the formulation of new guidelines, legislations and policies. It may also require capacity building and the empowerment of local communities, by establishing institutional linkages and processes that will accommodate local peculiarities. The following section of the chapter clarifies the country of study.

2. COUNTRY OF STUDY

The country of study is Lesotho. Lesotho is one of the Southern African countries which is sometimes described as a tiny mountainous country engulfed by the Republic of South Africa. The map showing the location of Lesotho in Africa is supplied in Annexure 1. Detailed information about Lesotho can also be seen in Chapter Four. The first section of Chapter Four again clarifies background information about the country of study.

The next section focuses on the postulation of the study problem as stated in section 3 through sub-sections 3.1 to 3.6.

3. POSTULATION OF THE PROBLEM

While attempting to postulate the problem, this study acknowledges that there have been efforts and strategies made by various governments and other conservation agencies to conserve and manage land resources in various places under study. The input and efforts put into conservation initiatives by various governments and international agencies have not yielded much dividend in terms of sustainability. In other words, these efforts and strategies have either not been sustained or have failed dismally. The recurrent failure to sustain conservation initiatives in developing countries, and especially in the Kingdom of Lesotho has resulted in the acceleration of land degradation.

The perceived increasing land degradation issues and the inevitable associated conservation problems include:

- Value placed on land resources
- Local communities' involvement
- Local communities' capacity to participate
- Incentives to participate in conservation initiatives
- Jurisdictional conflicts

In providing detail on the above highlights, a few other issues will also be discussed in passing.

3.1 Increasing land degradation

There have been repeated warnings that land resource degradation problems are worsening and are already posing serious threats to human well-being and survival. There has also been growing concern for the welfare of other organisms and the environment in general. Indeed, in the recent past, the scale of human demands on the environment had grown so large that land resources and even entire ecosystems upon which human, health and livelihood depend, are being over-exploited (Barrow, 1995; Yeld, 1994). The over-exploitation of land resources has necessitated reactions which regularly hit the headlines of newspapers, thereby also attracting several local, national and international workshops and conferences worldwide. This perceived problem is however not a new phenomenon. The severity of land degradation in some developing countries presents a good pointer, indicating the necessity to seek alternative approaches towards conservation of land resources. Besides the earlier general references on this issue see also Marake & Molumeli, (1999); UNEP *et al.*, (1998). There is a particular study conducted in Lesotho by the MoA, (1999) which reveals that land cover change in Lesotho has dramatically increased over the period 1989 to 1994 (see also South Africa Satellite Application Centre, 1999). (see Chapter 4).

3.2 Value placed on land resources

Bromley (1994) and UNEP *et al.* (1998) note that placing a value on land resources in developing countries has not encouraged the sustainability of such land resources. The above authors have opined that unless land resources use is valued in economic terms, people will not appreciate that it is reasonable to conserve it. Also, it is moreover perceived that the pattern of life of the rural dwellers who do not have many alternative means of livelihood other than subsistence farming could constitute a threat to conservation especially when one considers the limited available arable lands in most local communities. The relevance and applicability of these claims in the communities of study need to be established for the successful practice of community-based conservation.

3.3 Involvement of local communities in conservation programmes

Individuals and groups have managed land resources before now, yet land degradation has continued unabated. Community involvement has, in the recent past, been advocated for by all. While opinions about the desired level of community involvement differ, real community involvement has been perceived by the majority to be the gateway to truly successful conservation programmes. It is important to recall that Barrow (1995), Botes & Van Rensburg (2000) and Schreiber & Hill (1994), advocated for local communities' conservation consciousness and intervention. The recognition of the difficulties in actualising the concepts of "*bottom-up approaches*," "*grassroot involvement*", "*people-centred approaches*" and "*effective community participation*" raises research problems. Indeed, until the reasons why people respond the way they do to land resources conservation programmes are established, it will be unreasonable to attribute the failure of conservation programmes to either the primary, or secondary and tertiary stakeholders³.

3.4 Local communities' capacity to participate in conservation programmes

Governments and other conservation agencies have for decades under-rated the capacity of local communities to participate effectively in conservation programmes. This may be

³ The primary stakeholders referred to in this study are the local communities who are the host and immediate beneficiaries of land resources conservation projects, while the secondary and tertiary stakeholders are those external partners who provide unconditional support to local communities to carry out conservation initiatives. These external partners include the national and international governments and donor conservation agencies.

due to the claim that local people have not done much without the government initiating, implementing, monitoring and evaluating land resources conservation projects in most local communities in developing countries. This implies that local communities have relied too heavily on external institutions. In this regard, two pertinent questions may be raised: Can local communities actually conserve their lands without external support interventions? What are the efficient support services needed to capacitate local communities to meet the challenges of land degradation?

These and many other crucial issues which relate to local capacity building and empowerment need to be addressed if community-based approaches in land resources conservation are to be achieved.

3.5 Incentives to participate in conservation initiatives

Local communities in developing countries, particularly in the areas under study, depend heavily on food-for-work and cash payment incentives to participate in conservation activities. Where either of the above incentives is not provided, land resources conservation activities could be brushed aside for productive engagements which generate immediate benefits (Botes & Van Rensburg, 2000; Ghai, 1994; Rozanov, 1994; Schwartz, Simpson & Birkholz, 2000; Sondergaard, 2000). The above types of incentives are not sustainable and could negate community-based approaches if the reasons why local communities demand food-for-work and cash payment incentives are not established. Besides establishing the reasons why local communities demand the above unsustainable incentive packages, it could additionally be established whether there might be some other motivational packages that can ensure effective community involvement.

3.6 Jurisdictional conflicts

The conflicts between conservation officers and local communities also warrant urgent rethinking about the current official conservation approaches to conservation. Bhatt (1998), and Porter, Ofori & Michael (1998) also noted this problem of conflicts which becloud conservation projects. The exclusion of the local communities in the planning

and implementation of conservation programmes could be instrumental in generating many of these conflicts. There are people who think that this is so because the people who live closest to protected areas have always been overlooked in the planning, implementation and benefit sharing (Cock & Fig, 2000; Isaac & Mohammed, 2002; Kothari, Anuradha & Palthak, 1998). These perceived problems, which have posed serious constraints to community involvement in conservation and management of land resources, need to be addressed with finality.

The above postulation of the study problem raises some pertinent questions: Can the government agencies continue to provide food-for-work and pay cash to all local communities for participating in any land resources conservation programmes? Are there situations in which local communities can be made to take centre stage in conservation initiatives and adequately share in the benefits? What is required to change people's perception and behaviour towards land resources use? How can in-fighting and gate-keeping issues amongst local communities be addressed? How can governments be made to appreciate indigenous knowledge systems and enforce a possible blend of both local and modern knowledge, thereby ensuring successful land resources management? These and other issues remain the perceived problems faced by conservation initiatives. One way of addressing these issues is by considering the following research questions:

- To what extent do Lesotho communities participate in official conservation and management of land resources?
- What is the nature of the working relationship between local communities and government officers in the conservation and management of land resources initiatives?
- What is the capacity of Lesotho local communities to participate in conservation and management of land resources?
- What are the factors that could impinge on the successful practice of community-based conservation and management of land resources in Lesotho?

The next section focuses attention on the aim and objectives of the study.

4. AIM AND OBJECTIVES OF THE STUDY

The aim and objectives of the study emanate from the fact that many local communities in developing countries may be aware of the need to conserve and protect their environment, but lack the necessary knowledge, capacity, links and support to become practically active in conservation programmes. The broad aim of the study is: to explore the feasibility of community-based conservation and management of land resources in Lesotho and to propose guidelines for implementation of conservation programmes.

The specific objectives of the study are:

- To assess the current level of local communities' participation in the conservation and management of land resources in Lesotho;
- To determine the capacity of local communities to participate in community-based conservation and management of land resources;
- To examine causes of land degradation in sub-Saharan Africa;
- To examine land conservation attempts made in the developing countries of Africa and Asia;
- To identify impediments to community-based conservation and management of land resources; and
- To propose guidelines to address the identified impediments.

5. GEOGRAPHICAL SCOPE OF THE STUDY

Lesotho covers an area of about 30 538 square kilometres and is divided into four main ecological zones, namely: lowlands, foothills, mountains and Senqu river valleys (NES 1999). Lesotho has ten administrative districts namely, Butha-Buthe, Berea, Leribe, Mafeteng, Maseru, Mohale's Hoek, Quthing, Mokhotlong, Qacha's nek and Thaba-Tseka. It is also regionally zoned into North, South and Central. However, the study focuses mainly on the Lesotho lowlands ecological zone. This is because the lowlands are the worst hit by land degradation. The study concentrates on communities that have

official land resources conservation projects implemented by either the Conservation Division of the Ministry of Agriculture, (MoA) or by the Environmental Management for Poverty Reduction (EMPR) Project (a UNDP Project) implemented by the National Environment Secretariat (NES). However, the study focuses on community involvement in land resources conservation activities but addresses only physical land degradation on agricultural/crop lands, range/grass lands, protected area and bare lands of the study communities.

6. JUSTIFICATION FOR STUDY

This study has been necessitated by accelerated land degradation and the failure of conventional approaches to conservation and management of land resources programmes to bear dividends in developing countries and particularly in Lesotho. In justifying the study the following points are also considered.

- Firstly, land degradation in the developing countries is rapidly becoming a vogue, so much so that large areas of fertile land have been largely depleted. Thus, as population growth catches up with food production, indigenous firewood and medicinal plants are over-exploited (Ahuja, 1998; FAO, 1999; Morgan, 1995; Songorwa, 1999; Whiteside, 1998). Other consequences have been that the entire bio-diversity is consistently and continuously under pressure. Also, the aesthetic aspects, which in the past contributed to the tourist industry, as well as natural systems, are undergoing accelerated decay. The rate of land cover change in Lesotho has been highlighted earlier in this chapter. Whiteside (1998) opines that due to the accelerated rate of land degradation, the majority of rural communities appear to be helpless while their future (land resources) degenerates and decays continuously, thereby leading to perpetual hunger and poverty. This situation according to UNEP (2000) already affects close to 75% of the population who reside in rural communities where land is the major source of livelihood. Involvement of local communities in the process of conservation could reduce the rate of land degradation and also sustain conservation programmes.

- Secondly, past land resources conservation project approaches, which appear to have excluded local communities, have jeopardised efforts made to conserve, manage and sustain land resources in developing countries (see Kothari, Anuradha & Palthak, 1998; UNEP, 2000; Yeld, 1994). Land resources conservation programmes have also not been sustainable because government and other agencies have initiated and implemented conservation programmes with little attention to the land users (Stocking & Garland, 1998; Whiteside, 1998). In order for local communities to sustain their livelihood, the people need to be involved and empowered. Thus, empowerment of local communities' has been suggested by many to be the surest way to sustain land resources conservation programmes. Unless local communities are empowered, government and other agencies will continue to be the sole actors in the process. Therefore, the urgent need to capacitate the people for the tasks of conserving and sustaining conservation initiatives is another justification for this study.
- Thirdly, contradictory conservation measures and a lack of recognition and integration of indigenous knowledge and expertise into the system can be addressed in order to foster effective community involvement (Isaac & Mohammed, 2002). Despite the devaluation of indigenous knowledge in land resources conservation, available studies indicate that the local communities still seem to have much to offer to conservation programmes (Borocho, 1998; Ghai, 1994; Ghimire, 1994; Schafer & Bell, 2002; Songorwa, 1999; Yeld, 1994).
- Fourthly, the number of failed land resources conservation projects and the management problems associated with the on-going conservation projects in the developing countries also justifies the quest for an alternative approaches to land resources conservation. The practice of the alternative approaches requires research efforts to determine all that would be involved.
- Fifthly, research institutions, international agencies and development organisations and the conservation communities at large who are the potential beneficiaries of this study, are currently encouraging the practice of community-based conservation of land resources. The quest for community-based approaches

to conservation programmes acknowledges the weaknesses of the conventional approaches and the realisation of the need to involve local communities whose livelihood depend on land resources. This practice, being a relatively new paradigm, requires research efforts.

- Sixthly, and above all, available studies on land resources conservation have however made serious observations about the degrees of land degradation in developing countries and the consequences of the top-down conservation approaches of government agencies. Despite these recurrent observations, no serious attempts have as yet been made to carry out in-depth feasibility studies on sustaining conservation attempts. This gap, (in-depth) which this attempt hopes to bridge, also justifies this study.

Besides the above points of justification, effective involvement of local communities in the process of conservation is being advocated worldwide because of the following expected benefits, which include:

- Involvement of local communities is expected to provide a unique assurance of sustaining land resources conservation initiatives. This is because local communities guarantee greater stability and continuity in conservation initiatives than government and other agencies which come and go. According to Borrini-Feyerabend (1997), the local communities' investments are made for the next generation rather than for the next election.
- Local knowledge, skills and other local resources can be mobilised and fully employed.
- Local communities better understand the causes of land degradation of their particular environment and the possible remedies than outsiders.
- The nature of contributions available to the people provides greater opportunities for flexibility of conservation initiatives that respond to local conditions.
- The overriding benefit of local community involvement is the increased effectiveness of land resources conservation initiatives.
- The practice ensures access to land resources to local communities, thereby

- encouraging the peoples' commitment to conservation activities.
- The practice encourages self-reliance. It also discourages continuous dependence on external conservation agencies.
 - Involvement of local communities brings in full utilisation of available human and material resources in the local communities that would otherwise remain idle.
 - When local communities take part in assessing land degradation problems, they acquire information that enhances their awareness of the factors that play roles in their livelihood.
 - The practice provides opportunities to both outsiders and local communities to share and also integrate their relevant knowledge and skills on land resources conservation initiatives.
 - Equity is broadly strengthened by this practice.

According to critics, some of the potential disadvantages of involving local communities in conservation initiatives include:

- Conservation projects lack government agencies' coverage and support.
- Conservation projects suffer from long delays and sometimes result in endless planning processes.
- Conservation projects are locally based and may have limited scope.

7. RESEARCH DESIGN AND METHODOLOGY

Since every research method has limitations and advantages, a multiple research approach is known to be more capable of disclosing the diverse reactions of participants (Obikeze, 1990). The study has, therefore employed a number of participatory methodologies which has generated qualitative data. The qualitative design employed a stratified purposeful sampling technique that ensured broad representation in terms of socio-economic status, conservation orientation, formal and informal educational levels and community conservation activism. These techniques helped the researcher to get beyond initial research concepts. Also, the findings from qualitative studies have a

quality of “undeniability”. A well-grounded source with rich descriptions and explanations of processes in local contexts has a meaningful flavour that often proves far more convincing to a reader than pages of summarised figures (see Miles & Huberman, 1994). Based on the above arguments for qualitative research approaches, focus group discussions were decided upon as an adequate instrument for data collection of this study. In addition, personal contact and field visits techniques were also employed. The personal contact approach enabled the researcher to develop a more intimate and informal relationship with the study participants. Other data collection methods employed were: literature study, documentary analysis, and informal and formal interviews of land resources conservation project managers and relevant government officers. The field observation method was also used.

7.1 Population of study

The study area is in Lesotho’s lowlands ecological zone. The two chosen districts are Mafeteng and Maseru districts which had a population of 224 312 and 411 235, respectively, in the year 2000. The projected population of these districts between 2000 and 2026 is shown below in Table 2.

Table 2: Projected population of Mafeteng and Maseru districts from 2000-2026

<i>District</i>	2000	2006	2011	2016	2021	2026
Mafeteng	224 12	259 658	280 825	303 475	325 610	345 707
Maseru	411 235	571 262	662 576	755 441	845 110	928 814

Source: LBS (2001)

Table 3 below reflects the distribution of the Lesotho population by ecological zones.

Table 3: Distribution of Lesotho population in ecological zones by percentage, 2000

Ecological zone	Surface area %	Population %
Lowlands	17	58.6
Foothills	15	12.4
Mountains	59	22.8
Senqu River Valley	9	6.2

Source: LPD (2001)

Table 3 shows that the lowlands zone that occupies 17% of the country's land space, harbours almost 59% of the total population. The foothills, with 15% of the total area, have 12.4% of the population. Meanwhile, the mountain areas with 59% of the country's land area have 22.8% of the population while Senqu River Valley covering 9% of the land space, is host to 6.2% of the country's population. The above distribution of population clearly justifies a concentration of 59% of the country's population on the limited land space of the lowlands. The consequence of the population concentration on the lowlands is that it places much pressure on the scarce land resources on the limited land area as shown above.

7.2 Selection of research sites

The southern and central regions of Lesotho are chosen as study regions. Mafeteng represents the southern region while Maseru represents the central region. Mafeteng and Maseru districts were selected for study for the following reasons:

- These two districts have the characteristic feature of bare-landscape.
- According to the 1998 records of the National Environment Secretariat & Ministry of Agriculture of Lesotho, these districts have experienced more official land resources conservation activities and projects than the other districts in Lesotho.
- Because these districts have experienced more land resources conservation projects, it is therefore expected that the inhabitants would have had quite extensive experience in land resources conservation activities, both in terms of knowledge and levels of involvement and could, therefore, make reasonable contributions to this study.
- Varying grazing facilities for seasonal grazing are found in the two districts.
- Both districts have many communities clustered into different chief administrative areas.
- Both districts are accessible and can be reached throughout all the seasons of the year.
- The greater parts of the land area of both districts are lowlands.

Thus, two distinct areas with similar characteristic environmental features in terms of provisions and communities, which have both experienced government and community-initiated land resources conservation projects have been selected for study.

7.3 Sampling

See Annexure 2 for a map of Lesotho showing study communities (map page). Mafeteng and Maseru are part of the largest lowland districts in Lesotho. They are clustered into wards, each with a chief. For instance, Mafeteng is clustered into six large wards under six administrative chiefs.

Three research sites were selected from the Mafeteng six cluster wards. Maseru district is administratively divided into five wards, each under the administration of a chief. As with Mafeteng, the researcher selected communities for the study purposefully (research sites) in three clustered wards that had experienced the workings of the land resources conservation scheme.

7.4 Mafeteng District

Mafeteng District is administratively sub-divided into six chieftain wards as shown in Table 4.

Table 4: Six chieftain wards of Mafeteng districts and the three communities randomly selected for study

No	Chief Area (Ward)	Community	Male population	Female Population	Total Population
1	Kolo and Ha Mohlalefi Ward v ⁴	Ha Mosotho	119	120	239
2	Matsieng Ward	-	-	-	-
3	Tebang Ward v	Ha Matsoseng	328	286	614
4	Tajane, Ramoetsana's and Mohale's Ward	-	-	-	-
5	Matelile Ward v	Ha Setlako-tlako	85	87	172
6	Likhoele Ward	-	-	-	-

Source: LBS (1999)

⁴ The v sign indicates the selected wards for study.

From Table 4 above, it is clear that Kolo and Ha Mohlalefi, Tebang and Matelile wards were purposefully selected for the study because of their experience in conservation activities. A further purposeful sampling was made in the three wards where a community each was selected from a cluster of communities. Table 4 also shows the communities selected as Ha Mosotho, Ha Motsoseng and Ha Setlako-tlako. The population of each community is also indicated.

Ha Mosotho and Matsoseng are located in the western part of Mafeteng District while Ha Setlako-tlako is located in the eastern part of the district. The three rural communities are located away from any major roads. Any type of vehicle can access Ha Mosotho and Ha Matsoseng. However, only a 4 x 4 vehicle or donkey can reach Ha Setlako-tlako. This is because of lack of good, motorable roads. While Ha Mosotho is about 1 kilometre away from an untarred/earth road that links Kolo and Mafeteng communities, Matsoseng is 1.5 kilometres away from the adjoining earth road that links Tebang community and the Maseru-Mafeteng road. Ha Setlako-tlako is the remotest and is located 3 kilometres away from the Mose-qua-Matelile road.

The narrow part that falls in between fields, which accesses Ha Setlako-tlako community is 3 kilometres away from the Matelile road and 5 kilometres away from Matelile town. (see map in annexure 2)

7.5 Maseru district

Maseru is administratively sub-divided into five principal chieftain wards as mentioned above. Three chieftain areas are purposefully selected for study from the five chieftain ward areas. As with Mafeteng, three communities, Ha Tsilonyane, Ha Rankhelepe and Ha Khoabane are selected from the five wards for study. Table 5 below shows the selected communities and their respective populations.

Table 5: Five chieftain wards that make up Maseru district and the three selected communities

Ward/Chieftain Area	Community	Male Population	Female Population	Total Population
Matsieng Ward v	Ha Tsilonyane	122	113	235
Maama's Ward	-	-	-	-
Rothe Ward v	Ha Rankhelepe	232	254	486
Ramabanta's Ward	-	-	-	-
Thaba-Bosiu v	Ha Khoabane	110	120	230

Source: LBS (1999)

The communities are also quite accessible by vehicle. Ha Tsilonyane is located in the eastern part of Maseru. It is accessible through the Maseru-Mafeteng road and is located about 9 kilometres away from the Mantšebo junction. Ha Rankhelepe is located north of Maseru and can be accessed through Maseru-Thetsane (Industrial Area) by-pass road. It is about 20 kilometres away from Maseru town, while Ha Khoabane is located south of Maseru and can be accessed through the Maseru – Roma road through Makhalanyaane junction. It is 24 kilometres away from Maseru and is 5 kilometres from Makhalanyaane towards Thaba-Bosiu.

7.6 Focus group discussion sessions

The greater part of the data for the study was collected through focus group discussion sessions with members of the communities selected for the study. In all, nine focus group sessions were held. A minimum of seven persons which include (men, women and youths) were selected in the local communities to participate in the focus group sessions. Thus, the number of focus group discussion sessions was dependent on the population of the selected communities. Persons selected were those who had been involved in land resources conservation work, and the actual discussions were focused on land resources conservation experiences of participants and their communities.

Considering the relatively large size, age and gender of the majority of the participants in the study areas, this method was efficient and quick in collecting data. The distinctive feature of the focus group session was the prior analysis by the researcher of the situation in which subjects were involved. The advantages of this method were: the informal group situation, the open-ended nature of the questions, and the interaction among participants who encouraged and stimulated in-depth discussions. The language problem, inevitable in focus group-sessions, was bridged with the aid of research assistants who translated the content of the discussion schedule into Sesotho for the participants. The researcher acted as the facilitator of the discussions. One focus group session was held in each of the six selected communities with a population of less than 250, two sessions in communities of between 250-500 people and three sessions in communities with between 500-750 people (see Table 6 below).

Table 6: Sessions of focus group discussions held with local communities

Communities Studied	Population size of communities studied	No of Focus Group Sessions
Ha Mosotho	239	1
Ha Matsoseng	614	3
Ha Setlako-Tlako	172	1
Ha Tsilonyane	235	1
Ha Rankhelepe	486	2
Ha Khoabane	230	1

The focus group session's team consisted of the researcher and two research assistants who were conservation extension officers serving in the areas of study (Maseru and Mafeteng districts). The choice of conservation officers as research assistants during the study fieldwork was vital because conservation extension officers have the technical know-how, local language power and have the confidence and trust of the communities and an insight into how, where and when to reach or meet the people. These officers, in all cases, introduced the researcher's mission to the communities and to the chiefs, and explained the objectives and nature of the study before seeking permission to hold the

focus group sessions. The field officers were trained to guard against influencing the direction of responses. To be effective, coherent, successful, reliable and accepted experienced conservation field officers were selected by the researcher as research assistants. Subsequently, training was organised for the research assistants by the researcher. The training was done in two sessions. The first exposed the research assistants to the question guides and the principles that guide focus group discussion sessions and the focus of the study. The second session was to pre-test the question guide and also to examine their note-taking and recording abilities.

Convenient buildings or places were used for the focus group sessions. The purpose of the convenient places was to reduce distractions and to make the participants feel relaxed and also to avoid being exposed to the harsh weather. Accessibility of site, comfort and being able to use recording equipment were prerequisites in choosing a venue for the focus group sessions. In administering the focus group sessions, adequate care was taken to involve participants from different age groups, gender, educational qualifications, cross-section of households, and land holdings. Discussions were tape-recorded for later listening and transcription. To avoid possible mechanical fault, two tape-recorders were used.

7.7 Personal interviews with environmental management and conservation project managers and field officers

As mentioned earlier, the researcher interviewed staff of the Conservation Division of the Ministry of Agriculture, Lesotho (MoA) and Environmental Management for Poverty Reduction Project (EMPR) managers and the field officers covering Maseru and Mafeteng districts of Lesotho. The head of MoA & the EMPR project manager were interviewed separately, as were the field officers of both. A total of 18 interviews were held and the researcher also interacted with four practitioners, (see Annexure 3). The field officers, heads and project managers were interviewed in their conference rooms. The choice of conference rooms made it possible to avoid constant telephone calls and movement of visitors in and out of their offices. Securing appointments with the field

officers, heads and project managers was done in advance.

7.8 Field visits and personal contact with community members

The researcher made a number of field visits to each of the communities before the focus group sessions were held. The implication of this is that foreknowledge of the areas and their land resources conservation problems eased the task of data gathering confronting the researcher. It also helped the researcher to construct interview schedules for the focus group sessions. The fieldwork enabled the researcher to determine the extent of land resource degradation and its consequences on the people's productive systems and on the environment itself. One possible unique advantage is that it allowed the researcher the opportunity to put more relevant questions to participants. This technique further ensured the following:

- It took away the fears local community members had about being used by people and government agents.
- It gave the researcher a good opportunity to note which section of the study had not been given adequate coverage.
- It revealed what the priorities of the people were and what the communities thought about their problems.
- It gave an insight into the local communities' general feelings and their participation in conservation and management of land resources activities.

7.9 Participants

The researcher limited the research population (focus group discussion participants) to people above the age of 18. This age limit was set for the purpose of addressing the age groups that have knowledge of the problems. Because of the numerous female household heads, which account for about 60% of rural households in Lesotho, and the drift of men to the urban centres and to the South African mines (LPD, 2001) 60% of the participants in the focus group discussion sessions were female. Of those granted personal interviews at the MoA and EMPR projects, females were also more than 60%.

7.10 Literature study

The sources of literature for this study were mostly documents from the MoA and EMPR, Lesotho. The researcher also used documents from the Council of Non-Governmental Organisations' (NGOs) and reviewed their activities on land conservation initiatives. Research reports by experts and consultants, research institutions, sponsored reports by governments, donor agencies, researchers and other individual reports from the British Council, the United Nations office, the Lesotho SADC Regional Office, and particularly the University of Free State libraries were reviewed. Journals of related professional bodies and other relevant publications were also used for up-to-date information on the topic.

8. DATA ANALYSIS PROCEDURE

Qualitative analysis was employed in this research because it was based on focus group discussion and personal interview techniques. Qualitative researchers have observed that the most serious and conspicuous difficulty in the use of qualitative data is that methods of analysis are not well formulated. Miles & Huberman (1994) clarify this seeming weakness of qualitative analysis when they say that research is more of a craft than a slavish adherence to methodology and that each method calls for the researcher to bend the methodology to the peculiarities of the setting.

In analysis, therefore, the tape-recorded discussions were translated from Sesotho into English. Subsequently, the transcribed discussions were reduced into simplified data. Data of similarities and differences were separately fused together and arranged systematically into accessible and compact forms. In presenting the data, the focus group discussions are arranged into Section A, while Section B presents the personal interview discussions. However, reference is made to each section while presenting the data. The physical features of land resource degradation of the study areas and the conservation projects embarked upon by the local communities are also presented qualitatively.

9. DEFINITION OF CONCEPTS

The key concepts in the study are community, conservation, community-based conservation, community participation, and land degradation. These concepts are briefly clarified as follows:

9.1 Community

In this study '*community*' refers to the group of stakeholders in the land resources conservation programmes. It also refers to a group of people who have a historical relationship with the land. Isaac & Mohammed (2002) agree that apart from local communities, other stakeholders in conservation and management of land resources of an area are the state agencies, the non-local, international communities and various NGOs that make-up the agencies that sponsor land resources conservation projects. Furthermore, community can be grouped into flexible, primary, secondary and tertiary community of stakeholders. According to UNEP (2000), Stocking & Garland (1998), and Whiteside (1998) community also refers to all those who have direct or indirect and long and short-term interests and concerns in the conservation of land resources, whether these land resources be close to or far from them. Sometimes the proximity criterion may be ignored for those who are staying in the vicinity but who are not dependent on the particular land resource. Thus, the primary communities involved in this study are Ha Mosotho, Ha Matsoseng, Ha Setlako-tlako, Ha Tsilonyane, Ha Rankhelepe and Ha Khoabane. The secondary and tertiary stakeholders are the Conservation Division of the Ministry of Agriculture (MoA) and Environmental Management for Poverty Reduction (EMPR) project, sponsor agencies and the Lesotho Government. In this study, community therefore, refers to all stakeholders far and near, primary, secondary and tertiary.

9.2 Conservation

Generally, conservation is essentially the preservation and protection of the environment such as wildlife and landscapes that have amenity value. Some scholars regard the

maintenance of environmental quality much more a necessity than an amenity. However, to many others, conservation means the planned use of land to ensure its continuing supply. This planned use of land is a much more dynamic idea of conservation because it embraces change and development, as well as a measure of protection (FAO, 1999). Conservation is also held to be the scientific management of natural environment and resources for the purpose of maximising their aesthetic, educational, recreational and economic benefits to society (Botha & Foucher, 2000; UNEP, 2000). This definition is attractive because it also implies that we can both eat our cake and have it (Brye, 1981). Conservation is a positive concept embracing the preservation, maintenance, sustainable utilisation, restoration and enhancement of land resources. The modern concept of conservation stresses the need for people to manage and maintain land sustainably. There is growing acceptance of the view that the best means of conserving land resources entails involving the host local communities in every conservation programme. One of the schools of thought in conservation promoting the “people approach”, accepts the new trend which aims at providing the right incentives and necessary institutional structures that will enable communities to manage land. These thoughts are based on the evidence that communities can become effective institutions for sustainable land resources management more especially if they are granted genuine ownership, that is, the right to use, the right to determine the mode of usage, and to determine access and distribution of benefit (Summers, 1999).

In this study, the term conservation means to ensure the survival of indigenous fauna, flora and natural ecosystems through wise use, as well as the strengthening of public environmental awareness. The term is progressive because it embraces the preservation, maintenance, sustainable utilisation, restoration and enhancement of land resources. It also involves the control of human use of the biosphere so that it may yield the greatest sustainable benefit to current generations, while at the same time maintaining its potential to meet the needs and aspirations of future generations. In the study the term conservation is used in the context of conserving land resources.

9.3 Community-based conservation

In this study, community-based conservation (CBC) can be defined as conservation of land resources that involves local communities. According to Cock & Fig (2000) and Ghimire & Pimbert (1998) community-based conservation can be seen at one end and from one extreme in which conservation agencies retain control but consult with local communities in planning and implementation. At the other end, from the other extreme, there is a situation where local communities are completely in control. Community-based conservation is therefore that type of conservation which ensures equity in participation (Summers, 1999). Conservation of land resources process involves empowering the local communities to generate their own initiative and develop their capacities to manage and sustain land resources. This study interprets CBC to mean conservation by the local communities and for the local communities. This interpretation thus excludes conservation attempts by government officers or private agencies, which entail no real involvement of the local communities or which only exploit communities' involvement in the form of labour. It also excludes some situations where a few dominant factions in a local community became involved and only try to reap the benefits from a conservation attempt. By using this term, the study explores possible ways of ensuring that a shift from a conventional approach to a community-based approach is established.

9.4 Community participation

It is increasingly being stressed in conservation literature that, for land resources conservation activities to be self-sustaining in the long run, it is important to ensure the active involvement and contributions of the people in the design, implementation, monitoring and evaluation processes (Borocho, 1998; Botes & Van Rensburg, 2000; Harvey, 1996; Kothari, Anuradha & Palthak, 1998; Schafer & Bell, 2002; Stocking & Garland, 1998; Songorwa, 1999). The community-based model or approach has compelling evidence that participation can, in many circumstances, improve the quality and sustainability of conservation projects. It also strengthens community ownership and the commitment of government. Community participation in conservation and management of land resources in this study involves local community creative force,

initiative, knowledge and resource for effective decision-making, planning, implementation, monitoring and evaluation in the conservation processes. Another use of the concept of community participation in this study is of the need to get all stakeholders particularly local communities, to respond to land resources conservation and management programmes initiated by the people and for their benefit. This is the converse of the idea that land resources conservation is solely the responsibility of governments.

9.5 Sustainable conservation

Sustainable conservation is both directly and indirectly the focus of this study and it is also supposed to be the wish and expectation of both governments and donor organisations. Unfortunately, the process of ensuring sustained conservation has been a difficult task for a country that almost entirely depends on others for survival. Lesotho, being one of the poorest countries in the world, may continue to find it difficult to provide adequate funding that would ensure sustainable conservation and rehabilitation works. Other reasons attributable to this are: the habitual payments for conservation and rehabilitation works in Lesotho; the effect of the short term duration of government and/or donor funded conservation projects; and in general, lack of capacity to maintain existing conservation structures while at the same time, ensure continuous survival and well being of local people who are directly affected by land resource degradation. It is also logical to emphatically say that the much the government of Lesotho, various international organisations and donor agencies have invested in this regard is yet to be sustained. In fact, such investment has neither changed the desert nor gullied nature of the Lesotho environment. To be sustainable, community participation, community capacity building, unconditional roles of governments and donor agencies and effective joint management and coordination of conservation projects have to be ensured.

As an extension of the above discussion, it is also important to calculate the value of conservation initiatives in order to ensure sustainability. In doing this, one has to determine the following:

- Determine the level of involvement of local communities in a conservation initiative.
- Find out whether such conservation initiative is the priority of local communities.
- Determine also the expected inputs and outputs and the roles of local communities, NGOs and governments.
- Determine whether such initiative provides short or long term results and how the results will impact positively on the future of beneficiaries.
- Most importantly, is to determine the sustainability and replicability of such conservation initiative.

9.6 Land degradation

Land degradation is one of the major challenges of our time and many see it as the single most immediate threat to the world's food security and human livelihood (Michael, 1995). In this study, land resources⁵ include all natural resources contributing to agricultural production. This covers vegetation, grassland resource and forests. It also includes the ecological environment and bio-diversity (FAO, 1999; UNEP, 2000 & 2002). Degradation, in this context, means the temporary or permanent lowering of the capacity of land resources. Land resource degradation is discussed within the coverage of croplands, range or grasslands, forest, protected areas, and marginal land of the areas of study.

10. CONCLUSION DRAWING AND VERIFICATIONS

Conclusions were drawn, based on the data verified by excursions back to the field notes and to the transcribed focus group discussions, from interview notes and from arguments amongst participants. This was done to establish findings. The findings, which emerged from the data, were also verified for their plausibility and conformity. The consensus views of participants on issues were taken to be the views and opinions of the community which they represented.

⁵ Land resources referred to in this study do not include soil and soil chemical components.

11. STRUCTURE OF THE STUDY

The general orientation of the study having been dealt with in Chapter One, Chapter Two deals with the causes of land resource degradation in sub-Saharan Africa⁶. Following discussions on the causes of land resource degradation, characteristic features of land resource degradation in the region are discussed. Chapter Three devotes attention to some attempts made to actualise conservation and management of land resources in some developing countries. Chapter Four deals with an overview of land resources conservation activities in Lesotho. The chapter addresses in detail, the forms of conservation activities embarked upon by the Conservation Division of the Ministry of Agriculture, Lesotho and the Environmental Management for Poverty Reduction project. Chapter Five discusses data from the entire study. Chapter Six focuses on conclusions and recommendations, which include emerging guidelines for the practice of community-based land resources conservation programme in Lesotho.

⁶ Sub-Saharan Africa referred to in Chapter Two excludes the Northern Africa zone. However, the Northern African countries are included among the case studies in Chapter Three as part of the developing countries.

CHAPTER TWO

LAND DEGRADATION IN SUB-SAHARAN AFRICA

1. INTRODUCTION

The issue of land resources conservation, which has attracted widespread international, regional and national attention, has been necessitated by the escalating land degradation around the world. Land degradation refers to a reduction in the quality of land resulting in the diminished usefulness of the land. Rozanov (1994) describes land degradation as soil loss and the removal of material from land surface to the ocean. Land degradation is made evident by loss of fertility, which results in low productivity, loss of genetic resources and a reduction in amenity or aesthetic values (Botha & Fouche, 2000). The threat of land degradation affects humankind's capacity to feed itself and establish a sustainable base for development. The land degradation phenomenon has affected about 2000 million ha of land, which is equivalent to 15 percent of the earth's land surface (UNEP, 2000). It also affects more than 900 million people in 100 countries (UNEP *et al.*, 1998). Based on the level of its severity, the UNEP (1998) has estimated that over the next two decades, 135 million people will face forced migration or famine as a result of food scarcity caused by soil infertility. Pelsler & Khrehloa (2000), note that South Africa loses three tonnes of topsoil per hectare annually and emphasise that this is far higher than the rate of topsoil formation, which is put at 0.1tonne per hectare per year.

In sub-Saharan Africa¹, the issue of land degradation is of particular importance. This is based on its severity, which was noted in Chapter One. Given the alarming statistics as noted by Pelsler & Khrehloa (2000), the causes of land degradation in the region have to be established, otherwise any conservation programme that is designed to address this problem may have difficulties. This chapter is, therefore, devoted to discussing the causes and the characteristic features of land degradation in sub-Saharan Africa.

¹ The term sub-Saharan Africa referred to in this chapter represents the Central, Eastern, Southern and Western regions of Africa. This means that the focus excludes the Northern African countries. However, emphases are occasionally made to Africa and the developing countries.

Sections 2 to 5 are devoted to discussing the causes of land degradation, while characteristic features of land degradation in the sub-Saharan region receive attention in section 6.

2. CAUSES OF LAND DEGRADATION

According to some experts, land degradation may be sometimes attributed to natural, direct or underlying factors. The natural causes of land degradation are usually identified as erosion, delicate and fragile topography, climate change, drought and famine. Direct causes refer to those unsustainable and inappropriate land use and management practices such as overgrazing and overstocking of livestock. Underlying causes are those factors that contribute to inappropriate and unsustainable land use by humans (human impact on environment). Those factors include human afflictions such as poverty, forced migrations, famine and overpopulation. Apart from the above classification of the causes of land degradation, some scholars classify the causes of land degradation into agricultural practices, overgrazing, deforestation and over-exploitation of vegetation (Barrow, 1993; UNEP, 2000). These factors may however be accommodated under the direct causes of land degradation mentioned above. Table 7 below shows the impact of the factors referred to in the latter classification of the causes of land degradation in sub-Saharan Africa.

Table 7: Causes of land degradation in sub-Saharan Africa

<i>Causes</i>	<i>%</i>
Overgrazing	35
Deforestation	30
Agricultural activities	27
Over-exploitation of vegetation	7
Industrial activities	1
Total	100%

Source: UNEP (2002: 64-5)

The above table identifies overgrazing as having the highest devastating impact at 35%, followed by deforestation at 30% and agricultural activities at 27%. Over-exploitation of vegetation and industrial activities account for respectively 7% and 1%. This later classification, however, is deficient because the factors cited therein overlap. Overgrazing, for instance, could conveniently be accommodated under agricultural practices, while deforestation could be subsumed under over-exploitation of vegetation. The above statistics differ from Oldeman's records of 1994 & 1999 mainly because of the interval between the two studies (1994 & 1999 and 2002 statistics). Other scholars have adopted the classification of the causes of land degradation into natural, direct or underlying factors. In discussing the causes of land degradation in Africa, UNEP (2002) identifies these factors as including water erosion, wind erosion, physical and chemical factors. These factors, which are again classifiable under natural causes, are shown in Table 8 below to have the following degrading impact on the land resource of sub-Saharan Africa.

Table 8: Land degradation in sub-Saharan Africa due to natural factors

Type	%
Water erosion	56%
Wind erosion	28%
Physical degradation	14%
Chemical degradation	2%

Source: UNEP (2002)

The above table shows that, overall, water erosion has the greatest devastating impact in sub-Saharan Africa, accounting for 56% of natural factors of land degradation. Wind erosion accounts for 28%, while physical and chemical degradation account for 14% and 2% respectively. The impact of each factor, however, depends on the climatic region, vegetation, topography and, sometimes, the extent of industrial development in the area. In analysis, Table 7 mainly outlines human impact on the environment while Table 8 represents the impact of natural factors on the environment. It is important to note here that the statistics accredited to water and wind erosion are aggravated by the act of

overgrazing and agricultural activities as shown in Table 7.

Again in discussing the causes of land degradation in sub-Saharan Africa, FAO (2000), refers to human induced causes of land degradation, which, on close examination, are classifiable under the direct causes of land degradation. Their assessment of human-induced land degradation in Africa is represented in Table 9 below.

Table 9: FAO's assessment of Human-induced land degradation in Africa for 2001

Total land area in sub-Saharan Africa. (million ha)	All human-induced land degradation (excluding agricultural activities). (million ha)				Human-induced land degradation due to agricultural activities. (million ha)			
	Severe	Very severe	Total	%	Severe	Very severe	Total	% of degradation
2967	482	293	775	26	157	98	255	33

Source: FAO (2002)

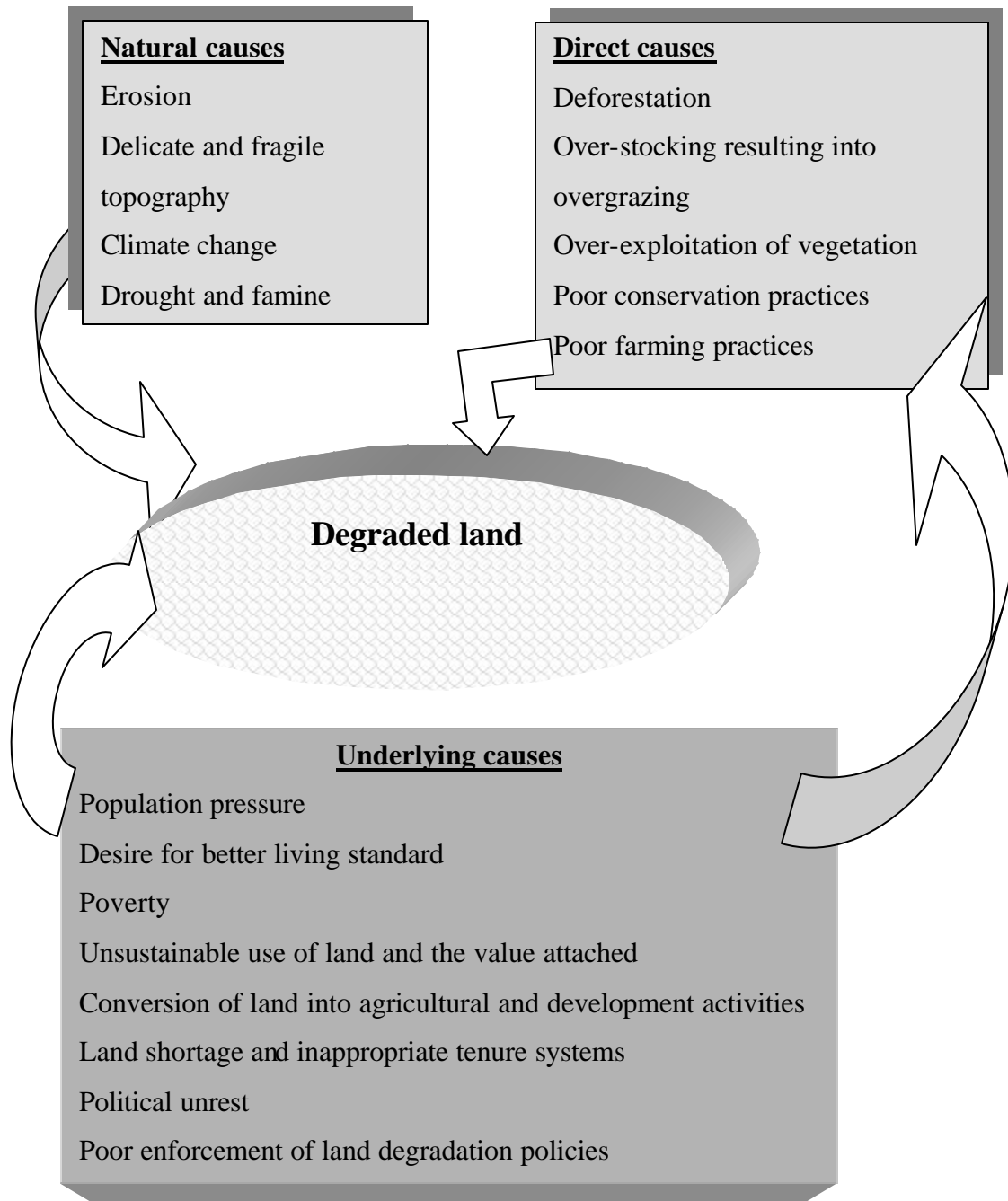
The above table has three sections and the first column reflects the total of land degradation in sub-Saharan Africa, the second shows the total degradation due to human-induced factors excluding agricultural activities, while the third shows the extent of land degradation arising from human-induced agricultural activities. The total land area degraded due to human causes stands at 775 million ha out of the total degraded land surface of 2967 million ha and this represents 26% of the total land area. Of this 26%, both human-induced and agricultural activities account for 33% of the total degraded area. It must, however, be noted that the impact of each of these factors may vary from place to place and from region to region.

Other factors that have been identified as being responsible for land degradation in sub-Saharan Africa include topography, soil composition, salinisation, water-logging and insufficient lengths of drainage network. Again, there are such factors as the construction of drainage to earth's beds, the absence of crop rotation and manure, planted trees and shrubs that do not survive, and the use of heavy machinery (Kharin, 1997). Owen &

Unwin (1997) also note that soil depth, presence of soil biota, organic matter, water-holding capacity, and nutrient levels also contribute to land degradation. From the above evaluation by different experts, it is evident that the classification of the causes of land degradation into natural, direct or underlying factors is most appropriate.

Based on the above overview of the general causes of land degradation in sub-Saharan Africa, the researcher goes further to illustrate, with a web diagram, the individual factors constituting land degradation. The web is based on the categorisation of the causes of land degradation into natural, direct and underlying causes.

Figure 1: Web of causes of land degradation



The above diagram illustrates the triangular causes of land degradation. In other words, it

can be described as a chain of natural, direct and underlying causes of land degradation. In the web, natural causes are accelerated by the direct and underlying causes. The direct causes act directly on land resources, at the same time boosted by the negative influences that the underlying causes exert on land. Thus, the different causes of land degradation relate negatively with each other against land resources. The interaction between the different factors threatens the survival of the entire ecosystem. Detailed discussions of the various causes of land degradation are set out below. Natural causes are discussed in section 3 through sub-section 3.4, the direct causes in section 4 through 4.7, while sections 5 through 5.8 are devoted to the underlying causes of land degradation.

3. NATURAL CAUSES OF LAND DEGRADATION

The natural causes of land degradation as shown in the web diagram are the following: erosion (water and wind erosion), delicate and fragile topography, climate change and drought and famine are discussed below:

3.1 Wind and water erosion

Many parts of Africa are prone to wind and water erosion, with 56% of the land being prone to water erosion and 28% to wind erosion (UNEP, 2002; see Table 9). Although erosion has occurred throughout the history of the world, it has intensified in recent years. According to Owen & Unwin (1997) 75 billion metric tonnes of soil are removed from the land worldwide by wind and water erosion per annum, with the most coming from agricultural land. In addition to substantial land losses of nutrients, water erosion causes significant ecological damage. The removal of soil affects plant composition and depletes soil biodiversity. Erosion not only destroys the immediate agricultural lands where it occurs, but it also affects the surrounding land. Morgan (1995), Morgan & Rickson (1995), and Oldeman (1994) categorise the severity of land degradation into light, moderate, strong and extreme. They further suggest that wind erosion is more devastating in terms of land degradation. However, this is only applicable in the dry land zone. On the other hand,

FAO studies of 1999 have shown that water erosion has a more devastating impact on land in sub-Saharan Africa region.

In some areas of sub-Saharan Africa, agricultural lands are degraded and abandoned while most forests are cut and converted to other uses. With the increasing population in sub-Saharan Africa, there is the likelihood that food shortage and malnutrition have the potential to intensify (Owen & Unwin 1997). As noted earlier in this discussion, the topography of the land, soil composition, the level of vegetative cover, the soil depth, the presence of soil biota, organic matter, water-holding capacity, and soil nutrient levels influence the rate of erosion. In Lesotho, for instance, the topography of the land has contributed immensely to the severe erosion of the landscape, which the GoL (1999:85) estimates to be over 40 million tonnes annually. The same report further stresses that degraded rangelands, rock, and gullies occupy the largest proportion of the country's land, while forest cover has shrunk and has given rise to severe soil erosion.

Although erosion is a natural factor, it is the opinion of the researcher that the greater part of land degradation in sub-Saharan Africa is caused by human induced land degradation activities and that it is within human capacity to correct and control its activities. This may be achieved through identifying some control mechanisms which if enforced, can significantly contribute towards the sustainability of land resources.

3.2 Fragile environment and the resultant effects of low regenerative capacity of land

Studies such as by FAO (1999), Oldeman (1994), and UNEP (2000) have acknowledged that much of sub-Saharan Africa is environmentally delicate and has a low level of regenerative capacity. The delicate nature and the low level of regenerative capacity of much of sub-Saharan African lands and/or environment make it fragile and sensitive to any little impact. Thus, any little impact on the land creates severe and almost irreversible damage. As a result, large areas of cropland, grassland, woodland and forests are already seriously degraded. Due to the fact that much of the African economy depends mainly on

land resources, the livelihood of millions of Africans is being put at risk, as the decline of land resource results in lower agricultural yields (Oldeman, 1994). Above all, the hope for sub-Saharan African countries of achieving a sustainable economy in the foreseeable future may remain bleak. The reason is that the earth's soils nutrient and vegetative cover are washed away at a rate that cannot be regenerated. The sub-Saharan Africa is not exempted. Pelser & Khrehloa (2000) and UNEP *et al.* (1998) as earlier mentioned, support the fact that man's extensive use of the fragile environment (like the case of Lesotho) is currently actually exceeding the regenerative capacities of the earth's major biological and physical systems, which is put at 0.1 tonne per hectare per year. The danger has always been that the earth including sub-Saharan Africa may be approaching a point where it will not be able to meet the demand for the environment's goods and services, especially as the world's population is expected to double over the next century.

In this study, the researcher agrees with the opinion that some lands are fragile by nature and have low regenerative capacity but suggests that if these weaknesses are recognised by land users, such lands could possibly be conserved. In a situation where they are put to use, practices that would ensure sustainability of its biological diversity could be adopted. Africans should therefore, treat Africa's fragile land with care, knowing that its fragility needs to be protected for posterity.

3.3 Climate change

Climate change as it impacts on land degradation in sub-Saharan Africa can be categorized into macro and micro impacts. The macro impacts relate to the global heating of the earth while mirco impacts relate to the human impacts on climate condition locally.

- **Macro climate change (heating of the earth)**

Climate change has increasingly become a major factor in the reduction of biological diversity in sub-Saharan Africa. Changes in climate affect the boundaries, composition, and functioning of ecological systems, including forests. Many species migrate as the climate warms or becomes cold. According to Whiteside (1998) many such migrating

species die in the process because of adaptation problems. Climate change also accelerates desertification and land degradation, and these processes are further exacerbated by variations in weather.

Although sub-Saharan African countries currently contribute only a small proportion of the heat-trapping greenhouse gases that cause climate change, there is need to articulate control measures at this stage. This is because the pursuit of development and industrialisation is expected to lead to higher levels of greenhouse gas emissions in the nearest future. Thus multi-sectoral government ministries, agencies and institutions representing Transport, Industry, Energy, Agriculture and Natural Resources, Revenue and Housing need to strategise on possible means of controlling and minimising gas emissions.

- **Micro climate change (human impact)**

Climate change primarily results from such land-use practices such as deforestation and other human activities such as the burning of fossil fuels like coal, oil and natural gas (UNEP *et al.*, 1998). The amount of heat-trapping carbon released every year by human activities is estimated at 6 billion tons from burning fossil fuel and 1 to 2 billion tons from land-use changes, which include deforestation. About 3.5 billion tons of carbon is released into the atmosphere each year. Humans have also increased the levels of carbon dioxide in the atmosphere by more than 30 percent since the beginning of the Industrial Revolution and through large-scale use of fossil fuels. Therefore, the climate is projected to warm another 1 to 3.5 degrees centigrade over the next century (UNEP *et al.*, 1998). In effect, this will lead to more floods and droughts, thereby increasing the risk of hunger and famine for many in the sub-Saharan Africa (see 4.1 and 4.7 of this chapter for further details).

3.4 Drought and famine (macro impact)

Drought, which is one of the causes of land degradation in sub-Saharan African countries, is also common to other semi-arid regions of the world. Drought and famine are intertwined in the process of causing land degradation, as drought leads to famine.

They are both natural causes of land degradation which are generated by both natural and human factors. Due to the severity of drought and famine in sub-Saharan Africa, some people are forced to migrate and become refugees elsewhere, and the presence of large numbers of refugees leads to severe devastation of the land resource of the host communities, sometimes even resulting in further famine and migrations. There is, therefore, reason to believe that the increasing number of refugees in sub-Saharan Africa results from this vicious circle which starts with heightened drought and progresses through famine and migrations. Drought and famine also affect livestock population. Like humans, animals die in times of drought and famine from exposure to heat, thirst, hunger and diseases.

The Southern African region is currently faced with severe famine, caused by prolonged drought. The famine has been predicted to continue for a much longer period of time.

- **Drought and famine (micro impact)**

The resultant food crisis in the region has also been compounded by the land crisis in Zimbabwe, the killing of white farmers in South Africa and the general infertility of the land. In some rural sub-Saharan African communities drought and famine are seen as punishment by the ancestral spirit for either abandoning cultural values or as resulting from communities' disregard of ancestral commands. For instance, in Zimbabwe, the drought of 1991 was attributed to the Mhondoro spirit, which, according to local sources refers to the "Lion or the Honourable King of the jungle" (UNNGLS, 2000). The existence of such beliefs makes it difficult for local communities to face up to the challenges of climate change and to make such adjustments as may be necessary to accommodate such exigencies. The prevalence of such beliefs illustrates the need for proper education in the conservation of land resource. Such education, apart from helping to dispel superstitious beliefs should also discourage those actions that accelerate climate change.

4. DIRECT CAUSES OF LAND DEGRADATION

The causes of land degradation discussed under this section are deforestation, overstocking resulting in overgrazing, over-exploitation and bad conservation practices. These causes act directly on land resource and lead to moderate and sometimes-severe land degradation.

4.1 Deforestation

The widespread destruction of trees and vegetative cover for wood fuel, which is encouraged by the high prices of petroleum-based fuel, has also accelerated the process of land degradation (Pelser & Kherehloa, 2000). UNEP *et al.* (1998) states that the rate of forest loss increased from 12 million hectares per year in the 1970s to over 15 million hectares in the 1980s. Consequently, during the 1990s, deforestation continued at about 13 million hectares per year. In essence, humankind has continued to chop down and destroy the world's forest and has been responsible for the extinction of land resource. Other contributory factors are the rising demands for fuel wood, charcoal, and for more human settlements and agricultural practices. According to UNEP (2000), expansion in cultivation and grazing area is perhaps the greatest cause of deforestation. Sub-Saharan Africa has lost about 6.4 million ha of forest to the act of deforestation. On a wider range, in 2000, 0.8 million hectares of Africa's forest were lost to deforestation (WDID, 2002). Ninety percent of West Africa rain forest has already currently destroyed and it is at the same rate that the Central Africa forest is being destroyed (SABC, 2003). The above notwithstanding, the UNEP (2002) estimated the rate of change in sub-Saharan African forest at the figures reflected in Table 10 below.

Table 10: Change in forested land in sub-Saharan Africa 1990-2000

	Total land area (million ha)	Total forest 1990 (million ha)	Total forest 2000 (million ha)	% of land forested in 2000	Change 1990-2000 (million ha)	% change per year
Central Africa	524.3	249.4	240.3	45.8	-9.1	-0.37
Eastern Africa	243.8	38.8	35.4	14.5	-3.4	-0.87
Southern Africa	679.8	239.1	222.0	32.6	-17.7	-0.70
Western Africa	605.6	85.1	72.5	12.0	-12.6	-1.53
Western India Ocean	58.9	13.0	11.9	20.1	-1.1	-0.90
Africa	2112.3	625.4	582.9	125	-49.4	-0.7

Source: UNEP (2002:98)

The rate of deforestation between 1990-2000 is shown to have been worst in Southern Africa, which includes Lesotho.

The annual demand for industrial wood is estimated to increase from 1.6 billion cubic metres to 1.9 billion by 2010. This process is driven by increases in population and rising living standards in the sub-Saharan Africa (UNCHS, 2000).

Deforestation represents a potential source of greenhouse gas emissions, the reason being that, when forests are cleared and burned, much of the carbon is released into the atmosphere. UNEP *et al.* (1998) estimate tropical deforestation and burning to account for about one-quarter of carbon emissions into the atmosphere. Forest cleaning and burning account for between 7 and 30 percent of annual atmospheric carbon emissions (UNEP *et al.*, 1998:86). The depletion of forestry has also led to loss of output, jobs and exports in many sub-Saharan African countries. The cases of Nigeria and Rwanda, where there was depletion of forest due to war, are relevant examples (UNCHS, 2000). Even though deforestation and over-exploitation are acute problems of land degradation, overgrazing and agricultural activities seem to have had the most severe impact on sub-Saharan African available land resource (Ayoub, 1999).

From all indications, it is justifiable to say that Lesotho is one of the sub-Saharan African countries without adequate forest cover. This is because the area has the lowest forest

cover in the Southern Africa region (FAO, 2001). (see Chapter Four). Apparently, the rocky nature of the area of study does not permit serious development of forest. Experience has also shown that the few forests that are developed are easily destroyed by humans for fuel needs and most severely impacted on by grazing animals. Therefore, for sustainability to be achieved, political commitment to the protection of indigenous forests, sustainable harvesting practices and community commitment needs to be strengthened while developing alternative energy sources (UNEP, 2000).

4.2 Over-stocking which results in over-grazing

Drawing knowledge from the past, the over-exploitation of land resources in Africa has been exacerbated by different factors which stem from natural and human-induced forces. Excessive stock holding combines with drought to reduce the capacity of sub-Saharan Africa rangeland to recover. In some sub-Saharan African countries, it has always resulted in the continuous deterioration of some fragile and extensively eroded land base (NFAP, 1996). Overgrazing has caused unparalleled decline in the diversity of plant species as well as vegetative cover in much of sub-Saharan Africa. Inappropriate grazing management has been observed to cause invasion of some protected areas, thus destroying the vegetative cover and increasing land degradation. Over-stocking reduces production and, at the same time, threatens the long-term sustainability of the land resources base (Ayoub, 1999). UNEP (2002) notes that more than 1.5 million people in Mali, Senegal, Mauritania, and Sudan depend on livestock. The above figure is not yet threatening, but it is, however, significant to attract introduction of sustainable control measures so that stocking does not exceed carrying capacity. Control measures become more important especially if records of stocking are known to be on the increase. In 1995, Malawi had 0.8 million cattle, 1.1 million sheep and goats on its 50% pasture land. In 1996, Zimbabwe had 3.5 million cattle, 2.9 sheep and goats on 60% pasture land, while South Africa maintained 11.9 million cattle, 37 million sheep and goats on 66% pasture land. The statistics for Angola are 3.2 million cattle, 1.3 sheep and goats on 25% pasture land (Whiteside, 1998). The stocking in Malawi, Zimbabwe, South Africa and Angola could be scientifically compared if the size of stocking is based on international and/or

official regulations with due consideration to the size of pasture land and the carrying capacity of the available pasture land. Currently, comparison can hardly be made without bias. This is because of lack of official regulations on how to determine carrying capacity of pasture land. Despite this gap in determining carrying capacity of pasture land the LBS (1998) reports that the yearly rate of population increase in livestock has affected the rate of land degradation in Lesotho. Table 11 below shows the growth rate of some selected livestock in Lesotho, between 1995-97.

Table 11: Estimated number of livestock in Lesotho 1995/96 and 1996/97

Period of Survey	Cattle	Goats	Horses	Donkeys	Sheep
1995/96	539 000	732 000	98 000	153 000	951 000
2001/2002	729 662	826 598	95 469	178 895	1 082 518
% increase	35% inc.	12% inc.	-	17% inc.	14% inc.
% decrease	-	-	3% dec.	-	

Source: LBS (1998 & 2002:3-4)

The above table shows a significant increase in cattle, goats, sheep and donkeys for the period 1995-2002. The unusual decrease in the horses population is attributed to the high death rate and the number of stolen horses registered within the period surveyed. The cause of the death rate was, however, not known. The consequences of the significant increase in stocking have been the reason for the continued degradation of the Lesotho environment. The increased numbers of livestock are maintained on the country's 80% available pasture land (FAO, 1999 & 2001; Whiteside, 1998).

The incidence of overstocking may not change because it is a status symbol to keep livestock in many of the sub-Saharan African countries, as local communities attach more importance to the social significance of stocking. Its social significance includes its usage for marriages (payment of bride price) and funeral rites. Ownership of livestock also conveys status symbol and respect within local communities in some sub-Saharan African countries. Livestock also provides meat and milk as well as agricultural and transport services to the people. The increase of the size of herd is the only way nomads

save for the future (FAO, 1999). The above reasons account for why local communities may not limit the number of animals which they keep. No matter how debatable it may be, the fact that socio-economic reasons are always advanced for land degradation is also acknowledged by several authorities such as Bromley, (1994 & 1995); FAO, (1993 & 1997); Hitzhusen, (1994); UNEP, (2000) and Yeld, (1997).

However, it is unacceptable that socio-economic reasons advanced for over-stocking should override the continued survival of humanity. The survival of rural populations may not be sustained if stocking is not controlled to be in line with the carrying capacity of the available land resources.

4.3 Over-exploitation of vegetation

Population growth of livestock is not the only long-term threat to land regeneration but the over-exploitation attitude of the people towards land resources (vegetation) contributes another threats. The recognition accorded to immediate economic gains in sub-Saharan Africa countries rather than the more important future environmental costs of over-exploitation and other factor in human-induced land degradation is a major concern. As a result of this attitude, food import in sub-Saharan Africa has risen to dependency status (NFAP, 1996). This means that if the present trend were to continue, sub-Saharan Africa's ability to feed itself will remain slim. Both forest wood and products of rangelands greatly contribute to national and local economies. They make these contributions through the natural resources, provision of habitats and services provided by the ecosystem. Some of these resources and services have not been quantified in monetary terms because they are undervalued (UNEP, 2000).

Commonly owned land resources are particularly vulnerable to over-exploitation because they are also not valued in economic terms. In Lesotho, beside the practice of over-exploitation of the natural resources for agriculture and heating purposes the illegal trade in dagga and the harvesting of dagga and medicinal plants for illegal trade and traditional healings purposes are some apparent examples. The general over-harvesting of trees also

add to the poor practices that cause land degradation in sub-Saharan Africa. There is also concern about over-harvesting of a number of forest-dwelling mammals, which is a common practice in Central and Western Africa. In defence of human conservation practices, Botha & Fouche (2000) argue that land degradation often results from actions which seemed logical and morally acceptable to the local farmer at the specific time he took that decision. Blum (1997) states that no economic gain or loss is recorded in the basic accounting network when land resources are used. The position is that land resources are considered to be a free gift of nature. The study stresses that land resources should no longer be seen as free goods when conservation is concerned with minimising and sustaining the impacts of both consumption and over-exploitation of the land resource base. The over-exploitation and consumerist lifestyle has to be checked in some sub-Saharan African countries if the environment is to be successfully conserved (UNCHS, 2002). A range of economic and regulatory options is already available for translation into practical action. Examples of these are using the 'User pays' and the 'Polluter Pays' principles (UNHCHS, 2000). Market-based intervention, which gives the full cost pricing of land resource is also another advisable option (UNEP *et al.*, 1998). Unless the land resources base is made more profitable than resources exploitation in sub-Saharan Africa, land degradation will continue unabated and to the lasting detriment of humanity.

4.4 Poor conservation practices cause land degradation

The poor conservation practices that cause land degradation in sub-Saharan Africa countries cut across sectors of agricultural practices, works and construction. Some of these include insufficient lengths of drainage network, over-grazing of rangelands, drainage constructed to earths' beds and the use of heavy machinery. Others are: absence of crop rotation and manure; planted trees and shrubs which do not survive because of lack of proper and adequate nurturing; poor human attitude, as when some politicians and individuals chop down trees planted by their political opponents; ploughing of soil which leads to decline of soil organic matter of between 25 and 40 percent, thereby exposing land to wind and water erosion (UNEP *et al.*, 1998). Thus, the past and present human

intervention in the utilisation and manipulation of environmental resources have had unanticipated consequences (Oldeman, 1994). These interventions and manipulations are particularly crucial in the sub-Saharan Africa region, where unsustainable conservation practices have been identified as a threat to sustainable land uses.

This study also notes that governments' disregard for traditional solutions to land degradation negatively affects conservation efforts. Traditional systems of land use such as shifting cultivation and nomadic grazing, which were compatible with the environment are at present undermined by professionals for scientific, modern and mechanical responses to land resources conservation. Apart from the poor practices associated with land uses, the recent summit on sustainable development (2002), further focuses attention on poor practices, so as to include the impact of a chain of international trade and economic practices which result in low prices for agricultural and livestock commodities. This forces most developing countries to promote adverse land use practices with the intention of earning foreign exchange (UNEP, 2002). Other poor conservation practices which are worth mentioning includes following:

4.5 Indiscriminate use of harmful pesticides as a factor in land degradation

The uncontrolled use of pesticide affects both the crops and other land resources and this has contributed to land degradation in the sub-Saharan African countries. Even after the harvesting of crops, the impact of a pesticide is left behind and this has a long lasting effect on the ecosystem, such that the vegetative cover of the affected area and sometimes the neighbouring fields fail to recover their balance over a long period. For instance, in the 1980s, it was estimated that about 10 million hectares of irrigated lands were abandoned annually and that between 25-30 million hectares of the world's 255 million hectares of irrigated lands were severely degraded due to the accumulation of salts, while an additional 80 million hectares were reported to be affected by water-logging (UNEP, 2002). Irrigation schemes need to be properly designed and relevant policies that could control the use of pesticides on fields need to be articulated and enforced if land

degradation is to be properly controlled. Also, farmers need to be educated about the usage of pesticides: the need, when to apply, how to apply, and how to control its side effects. If not, the use of pesticides will continue to have negative effects on crops and vegetative cover.

4.6 The use of heavy machinery

The use of heavy machinery on agricultural land causes such physical degradation as compaction, sealing and crusting. Trampling of land by cattle also causes compaction and crushing. Compaction of land decreases the level of water infiltration and accelerates surface run-off of water and in the process degrades land resources. However, it must be noted that the use of heavy machinery is common only in mechanised farming, which is not common in the African tropical region. Trampling of land by cattle, however, is common and widespread in the sub-Saharan Africa region. The mechanised farmers in the sub-Saharan Africa need to be conscientised about undertaking regular environmental impact assessment of their fields. Also, cattle herders need to be informed about the harmful effects of trampling on both agricultural and range lands.

4.7 Bush burning

Bush burning is one of the major causes of land degradation in sub-Saharan Africa and is more prominent in tropical than in the non-tropical region. Bush burning is an acceptable means of preparing farmlands for planting. It also helps to build up, regenerate and reintegrate the ecosystem, particularly at the end of winter or the dry season. However, this common farming practice has been shown to be destructive because it destroys the natural regeneration capacity of young trees while at the same time killing the aged trees. Bush burning results in the concentration of animals in the unburned vegetation and this leads to the degradation of such vegetation by overgrazing (FAO, 2001). The determining factor for this practice is the appropriate timing. It is important to burn the bush during late summer or early autumn. Burning maintains bio-diversity in the long term, as long as it can be controlled to avoid the damaging effects on adjoining sites (Holmes & Richardson, 1999). Bush burning facilitates regeneration of plants, when it is carried out

after the first and second rains. The burning that destroys ecosystems is the unplanned bush burning, which sometimes, happens by accident. Unless land users and individuals are educated on when to burn their fields, bush burning may continue to devastate land and its entire ecosystem. This lesson confirms the knowledge that good conservation practices should no longer be the sole responsibility of government; rather, land users should employ traditional techniques in managing and conserving land resources. Conservation should not be seen as lying outside the power of individuals, but rather as the sole responsibility of individuals in communities. This is true because the earth's welfare depends neither on professionals nor the educated minority but on the whole of humanity. Ordinary citizens, whether residing in the countryside or cities, need to be able to rescue endangered species and build up sustainable communities.

5. UNDERLYING CAUSES OF LAND DEGRADATION

The causes of land degradation to be discussed in this section are: population pressure; desire for a better standard of living; poverty; unsustainable use and the value attached to land resources; conversion of protected areas into land for agricultural purposes; an inappropriate land tenure system; political unrest; and poor enforcement of land policies. The causes outlined above are described as underlying because they accelerate both natural and direct causes. In other words, the effects of both natural and direct causes of land degradation gather momentum through the negative impact of the underlying causes. The causes are briefly discussed.

5.1 Population pressure and land resources needs

It is common knowledge that an increase in human and livestock population results in an increase in the land resource needs of that population. These needs put pressure on the people to over-exploit the land through such practices as deforestation, resulting from the gathering of fuel wood and foraging (Ahuja, 1998; Barbier, 1998; FAO, 1999; Morgan, 1995; Place & Otsuka, 1997; Schrelber & Hill, 1994; Songorwa, 1999; Whiteside, 1998).

In the last three decades, the pressure on land has been the result of the need to increase food production to cater for population growth. Population growth in developing countries was responsible for a 72% expansion in arable lands and for 69% of the increase in livestock numbers during 1961-1985. This has led to desertification, soil erosion, deforestation, and deterioration of many natural environments (Pelser & Kherehloa, 2000). NFAP (1996) agrees that acute pressure from rising population on the limited arable lands, coupled with grazing on unsuitable lands, has done more harm than good to the environment. Anna (1991) also notes that over the past centuries, sub-Saharan African farmers have developed systems of agriculture that are in equilibrium with their environments, but that the rapidly increasing populations are bringing massive pressure to bear on the available lands and this has worsened year by year. In any case, it is logical to stress here that the developing countries would have suffered serious hunger and starvation if the expansion of arable lands as against conservation of land resources has been resisted.

Population pressure has progressively reduced per capita arable land. It has forced fallow periods to be shortened and sometimes abandoned. It has also provided only limited opportunities for crop rotation and it has further caused households to extend production on to marginal or unsuitable lands (NFAP, 1996). However, there are arguments that population density has little or no relationship with the degree of severity of land degradation. For instance, Stocking & Garland (1998: 31) note: *‘the simplistic notions that greatest pressures of population inevitably lead to environmental damage are flawed in their failure to appreciate the processes of adaptation and change from within society, and the capability to develop and co-opt technology in the face of human stress without external interventions’*.

However, (FAO, 1999) reports significant environmental impact attributable to the presence of some 650 000 refugees from Eritrea and Ethiopia on the Kassala area of Eastern Sudan for some 20 years (1973 to 1993). From the above, it is evident that a high population density exerts pressure on land resource; yet, it is also arguable that a larger

population is more likely to be aware of its impact on the environment and thus take early steps towards conservation. Population in this context acts as a double-edged sword. Despite the arguments for and against it, it is apparent from Table 12 below that the sub-Saharan African population has been on the increase.

Table 12: Annual population growth rate in sub-Saharan Africa in (Mid-2003)

Sub-Saharan Africa	Area of countries km^s	Population mid-2003 (millions)	Rate of natural increase	Projected population in 2025 (millions) % per year-2003
Central Africa	2 553 150	10.4	2.9	184
Eastern Africa	2 456 184	26.3	2.4	395
Southern Africa	1 032 730	50	1.5	84
Western Africa	2 370 015	236	2.7	402

Source: WPD (2003)

The population growth in sub-Saharan Africa ranges between 0.3 and 3.5% based on individual countries while the regional rate of natural increase ranges between 1.5 in Southern African and 2.9 in Central Africa. This rate of increase can be said to be significant in terms of its expected projected population for 2025 which will further pose a threat to sustainable use of land resources if no strict measures are taken to control the rate of growth in sub-Saharan Africa and particularly in Lesotho.

Considering the rising death rate from HIV/AIDS in sub-Saharan Africa, the effect on the population may become clearer in future. Until the rate of HIV infection is either controlled or a cure is found, the population growth rate of sub-Saharan Africa may decrease. The expected decrease in population growth rate in sub-Saharan Africa could have either negative or positive impacts on land resources. This is because of the argument that population pressure does not necessarily cause land degradation.

The argument that population pressure does not cause land degradation does not override the need for population control. Therefore, reduction in population growth rates should be the first step in the direction of sustainable land use in sub-Saharan Africa. Undoubtedly,

no conservation programme is likely to succeed unless there are policies to slow down population growth. Out of such numerous measures, “*priority should be given to multi-faceted approach for families to control and limit family sizes when it makes sense to the people socially and economically*” (FAO, 1993; Pelsler & Kherehloa, 2000: 35-6). However, such measures should not include the spread of HIV/AIDS pandemic as a means of controlling population.

5.1.1 The impact of the HIV/AIDS pandemic and rural/urban migration

As highlighted earlier, if the rate of population growth as shown in Table 12 is not controlled, the rate of hunger and starvation may increase and this could worsen the HIV/AIDS developmental crisis in sub-Saharan Africa and in Lesotho in particular. Despite the statistics in Table 12, it must however be noted that the population growth rate has not been categorised into rural and urban population growth rates. The difference between rural and urban population in sub-Saharan Africa is significant. Therefore such statistics should not be used to determine the impact which population growth may have on land resources in sub-Saharan Africa. The drift and migration of rural populations to the urban centres for white collar jobs is wide spread in sub-Saharan Africa, and this movement reduces the rural population and the impact such movement makes on land resources. Table 13 shows the net population gain and losses of selected districts in Lesotho.

Table 13: Net migration rate of Lesotho population 1996

District of birth	Population gained from other districts	Population lost to other districts	Net gain/loss
Butha-Buthe	9 870	11 120	-1 251
Leribe	36 180	21 353	14 827
Berea	39 894	22 116	17 778
Maseru	67 978	38 017	29 961
Mafeteng	22 834	27 817	-4 983
Mohale's Hoek	17 502	21 139	-3 637
Quthing	7 088	12 697	-5 609
Qacha's Nek	5 462	8 855	-3 393
Mokhotlong	3 774	12 322	-8 548
Thaba-Tseka	10 574	45 720	-35 146

Source: LBS 2002:17

Maseru city is the fastest growing city in the country. Table 13 confirms that all lowland districts except Mafeteng and Mohale's Hoek have larger urban populations in 1996 compared with the highland urban districts in Lesotho.

5.2 The desire for better living standards

The increasing desire for better living conditions, and the expanding need for land for economic purposes have resulted in the kinds of activities that have caused land to degrade continuously. Areas where yield is poor and people are striving to survive on the already degraded lands remain on the increase, particularly in sub-Saharan Africa. The available arable lands are neither sufficient for subsistence farming nor adequate for commercial farming. In many of these areas, subsistence requires overexploitation of the available land resource. People's aspiration to a better living standard on a fragile and already degraded land further deteriorates and weakens the capacity of land resources to regenerate and perhaps remain productive. This study agrees with this observation that it is poverty and joblessness arising from retrenchments, privatisation and structural adjustment programme policies in the region, that put pressure on limited available land resources. This unhealthy pressure on land needs to be checked through developing

alternative means of survival for the rural populace.

5.3 Poverty

Whatever the criteria adopted, the consensus remains that poverty in sub-Saharan Africa is widespread and rapidly increasing. The UNDP (1994) estimates, based on household income for 1990, suggest that 39% of all households in sub-Saharan Africa (rural and urban) exist below the poverty line (i.e. living on less than \$1 a day). World Development Indicators Database (WDID) (2002) notes that in sub-Saharan Africa countries, imports of goods and services exceeded exports by \$1.5 billion in 1997, \$1.6 in 2000 and \$1.8 billion in 2001. The outstanding debt (current US.\$) in the region stood at \$ 41 billion in 1997 and \$ 33.3 billion in the year 2000.

The standard of living could impact negatively on land resources, especially when there are no alternative means of survival for the rural populace. As earlier mentioned, household incomes are further falling in sub-Saharan Africa as a consequences of the implementation of the structural adjustment programme (SAP) (Whiteside, 1998:32). Pelsler & Khrehloa (2000) observe that there is a swelling number of poor and landless people putting uncontrolled pressure on the natural resource base as they struggle to survive. Since desertification in the region is expected to increase in the future, poverty is also likely to become more acute. This study agrees with various views concerning the negative impact of poverty on land resources in Africa and particularly in Lesotho, where poverty has been exacerbated by the ongoing retrenchment of Lesotho citizens in South African mines. Again, since land degradation is linked to poverty, unless the issue of poverty is addressed by providing the rural populace with alternative means of livelihood that can enhance sustainable agriculture, credit facilities and entrepreneurship programmes, land may continue to be overexploited (Whiteside, 1998:34). Thus, any programme aimed at reducing land degradation can hardly be accomplished if it fails to address reduction of poverty as one of the components of land management and conservation.

5.4 Unsustainable use of land and the value attached to its resource

The unsustainable use of land and the attendant deterioration are manifested in the accelerated rate of rangeland degradation. This is evident even to a passer-by in much of sub-Saharan African countries. This degradation poses a problem for much of the countries' productive resource base and also threatens the countries' capacity to either increase food production for the growing population or alleviate current poverty levels of the rural African populace (Lindskog & Tengbberg, 1994; UNEP *et al.*, 1998). This situation is further exacerbated by the activities of the few landowners and chiefs who use their control of the land to exploit the landless majority.

The aesthetic aspects of the African environment, which in the past had contributed to its economy as well as its natural systems, are undergoing accelerated decay (Barrow, 1993). The majority of African communities appear to be helpless while their environment degenerates into being fruitless and lacklustre. The high level of deterioration has been allowed to continue due to the poor value attached to land resources (Bromley, 1994). Even in protected areas, local communities' fight to gain uncontrolled access to land resources because of the assumption that land is a free gift of nature. Unfortunately, there are, as yet, no strong mechanisms in place to control unsustainable use of land resources in most African countries, except in protected areas where governments have absolute control and supervision (Isaac *et al.*, 2000; Mohammed, 2001). Mindful of the experiences of the past, this study opines that unless local communities are empowered to take full charge of the land resources available to them, and such control occurs within an environment where communities place premium value on land resources, the rate of land degradation may continue unabated.

5.5 Conversion of land into agricultural and other development activities

In general Africa's total land covers 29.6 million km², two-thirds of which is either arid or semi-arid. The percentage of agricultural land (cultivated and pasture) in sub-Saharan Africa varies from 54.7% in southern Africa and 46.6% in the western Indian Ocean islands to 19.3% in central Africa (UNEP, 2002). Also, FAO (2001) estimated that by

2030, an additional 57 million hectares (representing an increase of 25%) would be brought into cultivation in Africa. This expected expansion has to come from the conversion of existing forests and woodlands and from fragile lands with the attendant loss of natural habitats and ecosystems. This is bound to result in more serious land degradation in the region. The shortage of agricultural land makes it difficult to safeguard land for the exclusive use of the future population.

In the attempt to develop reserves and protected areas, sub-Saharan African countries have converted supposedly protected lands to agricultural uses. For instance, in Tanzania, Pure Reserve and Burunge Game Controlled Area have been converted into agricultural settlements. The Mkomazi Game Reserve was reduced in 1957 and again in 1966 to allow human settlement, while Maswa Reserve was reduced in size thrice in 25 years. In Malawi, parts of Liwonde and Nkonkhota National Parks were illegally occupied in 1988. In Mozambique, over 3000 people illegally occupy each of Gorongosa and Maputo National Parks (SADC, 1996). In Lesotho, where the development of dams (water schemes) has inundated both human settlements and agricultural lands, the conversion of reserve areas has also been experienced. This kind of pressure and other developmental activities remain some of the major driving forces behind land degradation. The Indian good practices where reserved land, taken over for any development project, is replaced by another land should be an example to sub-Saharan African governments if sustainability of land resources must be achieved in the near future.

5.6 Land distribution and inappropriate tenure system and their effects

The inequitable distribution of land is common in much of sub-Saharan Africa where distribution of land is based on the gender roles and socio-economic status of individuals. In some communities particularly in Lesotho, local chiefs consider individuals' loyalty and personal relationships in the administration of lands such that in some, men and women have no right and access to land. Ironically, the women share greatly in the day-to-day field activities and also relate well with land (Kothari, Amuradha & Palthak, 1998; Ghai, 1994; Jackson, 1994; Joekes, 1994; Kings, 1997; UNCHS, 2000; Whiteside, 1988).

It is important at this point to question what the future of land resources conservation activities would be if women folk who relate so well with land resources were culturally excluded from access and ownership?

South Africa and Zimbabwe are good examples of countries with inequitable land distribution systems. In South Africa, the white farmers own 87 percent of the land, whereas, the average land held per black person is slightly more than 1 hectare, while for the white counterpart the area is 1 570 hectares per person (SANP, 2000; UNEP, 2002). Land tenure policies in sub-Saharan Africa have resulted in the landlessness and displacement of individuals and communities. It is this inequitable distribution of land that has engendered the current land grabbing experiences in some sub-Saharan African countries. This inequitable distribution of land and its resultant effects have contributed to the poor attitude of the people towards land resources conservation in the region. Acceptable land reform policies have to be initiated in most of sub-Saharan Africa in the way it is currently going on in the Republic of South Africa. The administration of land that is put under the local chiefs is communal in a way, but the system has not been perfected to ensure sustainable conservation of land resources. Fair distribution of land has not been ensured by mere localising land administration structure. Reform that will care for the interest of every person needs to be initiated so that land is not continuously treated with *I don't care* attitude. An appropriate tenure system that cares for both men and women has to be put in place to ensure sustainability. This will encourage conservation, as it will serve as an incentive to land users.

5.7 Political unrest

The level of political unrest and the resultant refugee situation in sub-Saharan Africa also contributes to land degradation. Political unrest fuels widespread poverty. Refugees deforest land by clearing it for agriculture and fuel wood. The growth in illegal trade in natural resources in warring African countries has also caused land degradation. In Africa, the refugee figure of 23,500 people at the end of the 1950s rose to about 50 million at the end of the 1990s (UNEP, 2000). The environmental impact for 20 years of

the 650,000 refugees from Eritrea and Ethiopia on the Kassala area of Eastern Sudan has also supported this claim (FAO, 1999). As earlier noted, unless political unrests are checked in the region, the increasing number of refugees may continue to impact negatively on land resources. Environmental impact assessment is not made at the end of any war. Where it is made, emphasis is not on land degradation. Regional organisations need to do much more in the area of environmental management and conservation to ensure sustainability of land resources in Africa.

5.8 Poor enforcement of land resources conservation policies

Policies and mechanisms for enhancing sustainable land use are in place in many sub-Saharan African countries as well as the ongoing regional co-operative arrangements, but the implementation and enforcement of such regulations have been weak. The reasons for the general weakness have not been established but (Bromley, 1994; Hitzhusen, 1994; UNEP, 2000; and Yeld, 1997) agree that the weakness is due to economic forces which pressurise governments and communities into unsustainable practices for short-term profits. This study opines that it is not only economic forces that lead to poor enforcement of land resources conservation policies in Africa, but also the poor value and recognition attached to the conservation of land resources. In fact, conservation has never been seen to be a major issue to political leaders in Africa. Land resources conservation regulations have to be enforced at all levels despite the immediate short-term profit that accrues from unsustainable land uses.

6. A RANGE OF POSSIBLE SOLUTION REGARDING COMBATING LAND DEGRADATION IN SUB-SAHARAN AFRICA

From the above discussion on causes of land degradation, the following outlines of possible solutions to combating land degradation in sub-Saharan Africa are deduced:

- Protecting indigenous forest and ensuring sustainable harvesting practices in sub-Saharan Africa.
- Securing and protecting the fragility of the environment.

- Land resources need to be made more profitable than resources exploitation.
- Ensuring capacity building of local communities.
- Communal management of land resources as opposed to the autocratic and dictatorial chieftains land administration style also needs to be ensured in sub-Saharan Africa.
- Local communities need to change their attitude towards land resources conservation.
- Ensuring alternative means of livelihood for rural communities as this will reduce the pressure on land resources.
- The micro impact of climate change also needs to be monitored and controlled in sub-Saharan Africa.
- Lands taken over for development purposes need to be replaced to ensure sustainability in sub-Saharan Africa.
- Environmental impact assessments need to be made a necessary condition for development projects.
- Reducing poverty in sub-Saharan Africa.
- Controlling and reducing population growth.
- Land reforms that will ensure adequate land distribution is also a solution.
- Ensuring political stability in sub-Saharan Africa.
- Enforcing environmental conservation regulations.
- Controlling bush burning, and
- Controlling stocking of livestock in sub-Saharan Africa.

Whereas the above discussion has focused on the causes of land degradation and possible solutions in sub-Saharan Africa, the next section will address features of land degradation in the region.

7. FEATURES OF LAND DEGRADATION IN SUB-SAHARAN AFRICA

The characteristic features of land degradation in sub-Saharan Africa include loss of biological diversity, desertification, range and cropland degradation, destruction through mining and quarrying, pollution and water logging. For clarity, these features are

discussed below.

7.1 Biological diversity

Biological diversity encompasses all aspects of nature's variety which involve ecosystem diversity, species diversity and genetic diversity. It also involves the interaction of all components of the biosphere. It represents diversity at all levels of biological organisation and the entire community, which supports the continuing existence of life on earth (UNEP *et al.*, 1988). The conservation of biological diversity is fundamental to the success of sustainable conservation, because it includes the wildlife in natural systems of the earth that are life support systems found in the planet's atmosphere, oceans, freshwaters, rocks and soil. The need to conserve biodiversity has been expressed at various international levels, including the World Conservation Strategy (1998), the Earth Summit (1992), the World Commission on Environment and Development (1987), and other recent international conferences on conserving biodiversity. (see Chapter One section 1.2).

Human activities have caused a decline in biological diversity. It is estimated that 50 to 100 times the average rate of species loss would be avoided in the absence of human activities. In fact, considering the current trend of human exploit on land resources, as things now are, as many as one-half of all mammal and bird species may become extinct within 200 to 300 years (UNEP *et al.*, 1998:17). The impact of loss of biodiversity and of ecological destruction may not have been severe though such loss and destruction have not been accurately recorded. Original and local species have become extinct, while many more are being threatened. In this way, many plants and animals whose secrets and potential benefits are yet to be fathomed have been lost. The impact of human activities on biodiversity are manifested in several ways. Amongst these are the rapid rates of habitat loss, such as the disappearance of marshes and reed meadows. Others include: species extinction such as the disappearance of large game, springbucks and birds, resulting in the large proportion of birds currently being reported as rare. Again, there is reduction in genetic variability, which threatens the very existence of species (Chakela,

1997). The threats to forest genetic resource usually arises from direct human actions. Human beings have harvested medicinal plants, economically viable and decorative plants, forage plants, flora, forest trees, bacteria and fungi to the point of extinction. Wilson (2000) notes that humanity's food supply comes from a dangerously narrow spectrum of biodiversity. According to him, people have, throughout history, cultivated or gathered 7,000 plant species for food, but today only 20 species provide 90% of the world's food and maize, wheat and rice produce. The above notwithstanding, many environmentalists are optimistic that biodiversity is salvageable. Whether this happens in time to save the endangered species of the world depends fundamentally on the shift to a new ethic which sees humanity as part of the biosphere and its faithful steward, not just the resident master and economic exploiter. It is also being observed that a change of heart has begun in most countries, among a few far-sighted leaders and part of the general public. By and large, it should be noted that any conservation programme in the region without a component of biodiversity conservation may remain inadequate.

7.2 Desertification as an unfriendly phenomenon

Following the UNEP (1992) conference and the drawn up Agenda 21, the term desertification has been redefined from its original broader meaning: which extended to almost all forms of land degradation to a more restricted meaning: land degradation in arid, semi-arid and dry sub-humid areas resulting from adverse human impact. This study supports the latter definition, which states that desertification is an unfriendly phenomenon arising from the uncontrolled removal of natural vegetation through overgrazing, overstocking and the indiscriminate cutting and felling of trees. Other causes of desertification include poor farming systems, erosion, and harsh climatic conditions such as extreme dryness and cold weather. These natural and human-induced factors result in acute desertification (Barrow, 1995; Barbier, 1998; Chakela, 1999; Johnson & Lewis, 1995).

Relevant cases available are the Sahel drought in Mali of the early 1970s, which had nearly 1million 'environmental refugees'. The drought forced a half a million people to

leave Mali, while a sixth of the population had to leave Burkina Faso. It has also been reported that more than one-third of the population of Africa is under threat of desertification. Again, as earlier noted, in the southern edge of the Sahara, some 650,000km of once-productive land became desert and an estimated 50,000 to 70,000km of land go out of production every year (FAO, 1999 and 1997). The situation has worsened since these reports. While no recent study has been done in Lesotho it is true to say that nearly half of the entire land areas wear the characteristic features of a desert. Lesotho has a poor vegetative cover and low productive capacity which result from the rocky and dry nature of the area. From the above discussion, it may be appropriate to say that land degradation in some parts of Africa is equivalent to desertification or, at least, that it accelerates desertification.

7.3 Range and cropland degradation and the adverse effect on humans and livestock

Rangeland degradation is the reduction in the capacity of natural rangelands to support human and livestock needs. This type of degradation occurs as a result of overstocking, overgrazing and pasture mismanagement. In terms of cropland, one estimate has it that, out of approximately 8.7 billion hectares of global agriculture lands, about 2 billion hectares (25%) are already degraded, thereby reducing the basis of food production at the very time when the world population is increasing (Bridges, 2000). This type of degradation is very severe and widespread in the Southern African region and has, moreover, been attributed to the level of livestock that individuals keep. In Lesotho, approximately 359,650 hectares of rangeland have been invaded by Karoo shrub covering in the country's 9% of arable land. The degraded rangeland areas represent about 16% of the entire Lesotho rangeland (Chakela, 1997), while South Africa has approximately 66% of moderately to seriously degraded rangeland (Snyman, 1999). The above notwithstanding, it has been noted that the rangelands in sub-Saharan African countries have regenerative capacity, whereas the same cannot be said about the croplands in the Southern African region. This is why efforts to control land degradation over the years have encountered several difficulties. However, a few unsustainable project successes with regard to conservation of range and croplands have been established. Land

degradation is of great concern to the people of Africa because of the peoples' level of dependence on crop and livestock farming. Again, insufficient cropland has intensified the circle and web of poverty and joblessness amongst the people in the region.

7.4 Soil fertility decline

Soil fertility decline is another major source of concern for conservation in the region. Soil fertility decline is the deterioration in the physical, chemical and biological properties of soil. This also involves the lowering of soil organic matter, degradation of water holding capacity, reduction of available soil nutrients and build-up of toxicities (FAO, 1992; UNEP, 1998). Fertility decline has resulted in the increased use of fertiliser on farmlands. The continuous application of fertilisers on the land impacts negatively on land resources. It also reduces the nutrient retention capacity of land and depletes organic matter. Consequences of these have been poorer production levels. Other relevant issues that could have been discussed here have already been discussed under the land degradation and poverty sub-headings. However, the unproductive nature of much of sub-Sahara African's lands has become one of the major characteristic features of land degradation, and this should not be ignored if land resources are to be sustained.

7.5 Quarrying and mining leading to land loss

It is estimated that conversion of land through quarrying for building materials represents about 1.2 % of the total land loss in the sub-Saharan Africa. Mining operations also led to the loss of valuable agricultural lands. It is estimated that 28 billion tonnes of soil and rock are moved in sub-Saharan Africa per year, thereby causing erosion, siltation of waterways and metal contamination. The mining and quarrying of natural land resource are part of activities that degrade land. Mining sites are expensive to clean up and rehabilitate (UNCHS, 2000). The ecological side effects of these types of mining range from increased soil erosion to open pits that are left unreclaimed. Such open pits are sometimes converted to dams, ponds and waterlogged areas, which are physical evidence of the effect of mining and quarrying on land resources in the region. Dust emanating from the crushing of the aggregates affects the capacity of plants to manufacture their

own food, destroys the aesthetic quality of the environment and affects human health. The removal of river-sands also accelerates soil erosion. The overwhelmingly negative effect on the environment of mining is readily evident even to the untrained eye.

The destructive effects of mining on the environment are so colossal because most of such operations are undertaken without compliance with laid down procedures for protecting the environment. Environmental protection standards set by environment departments in various countries have not been adhered to in many African countries. It has also been extremely difficult for most government departments to enforce environmental regulations (Chakela, 1992; UNEP, 2000) mainly because compliance with such regulations will reduce the profit of the mining companies and thereby the revenue accruable to government. Despite all odds, it is important to note that environmental impact assessment and its compliance is an irrevocable condition for miners and developers.

7.6 Pollution and its effects in sub-Saharan Africa

Pollution was once the problem of the industrialised nations (Botha & Fouche, 2000). Yet, today it is a common problem for the sub-Saharan African countries. Industrial growth, urbanisation and the use of automobiles in sub-Saharan Africa have exacerbated this phenomenon. No matter the size of any community, pollution of all types and kinds is evident and increasing by the day. Air pollution in the region is on the increase as a result of motor vehicle emissions, burning of coal, burning of wastes and industrial carbon waste. There is also solid waste pollution arising from the indiscriminate littering and dumping of waste. Industrial by-products are also common in the region (IUCN *et al.*, 1998; UNEP *et al.*, 1998). Other forms of pollution in the region include: water pollution arising from sewage discharge into rivers, and waterways whose toxic effect causes corrosion of the riverbanks and the coral reefs. Chemical pollution arising from the inappropriate handling of agrochemicals such as organic fertilisers, plant insecticides and pesticides.

Several countries in the region have developed policies and regulatory measures aimed at reducing pollution but only a few of these countries have been able to enforce such regulations (Bromley, 1995; UNEP, 2000; Yeld, 1997). Imposition of fines such as 'polluter pays' taxation could be a way out of the problem for sub-Saharan African countries (Bromley, 1995). Unless the governments intensify efforts towards ensuring that there exist enforceable standard pollution regulations to control air, water and solid waste in the region is bound to continue to wallow in ignorance about the destructive results of uncontrolled pollution.

7.7 Water-logging

This is the rise of the water table into the root zone of the soil profile, such that plant growth is adversely affected by deficiency in oxygen. Water logging is commonly defined as 'light' for a soil profile depth of 3m for substantial parts of the year, and 'moderate' for less than 1.5m. The 'severe' degree occurs with a water table at 0.30cm depth and 'ponding' where it rises above the surface (FAO, 1993). In much of the region, it is not water logging that is actually the problem, but flooding on poorly drained areas. This is why it is important to tackle the effects of flooding as a matter of urgency, while efforts should also be made to check occasional cases of water logging in the region.

8. CONCLUSION

The foregoing discussions have proved that the extent of land degradation in sub-Saharan Africa calls for concern. However, the various causes of land degradation highlighted above have shown their devastating consequences in the regions. In all, writers, organisations and environmentalists have classified causes of land degradation into natural, direct and underlying. Each of the classified causes has either a direct impact on the land or it influences relevant factors to degrade land. In Lesotho and neighbouring countries water and wind erosion, overgrazing, deforestation, poor conservation practices, inappropriate tenure systems, climate change, drought and famine also have negative impacts on land resources.

The common characteristic features of land degradation in the region are biological diversity, desertification, and range and croplands degradation. Others include: soil fertility decline, pollution, mining and quarrying, water logging and salinisation. These prominent features are the phenomena found in different parts of sub-Saharan African countries. Having made these comments, it is important to observe that Africa is a vast continent, with more than 50 countries covering a large range of environmental conditions. Though the general measures for controlling land degradation remain the same for all countries, there are no ready-made remedies and panaceas. Despite the above analysis, it will be impossible to produce a conservation blueprint that can be applied to all areas of sub-Saharan Africa without modifications. Therefore, it is necessary that every country develops its own conservation strategies and tailors them to its own unique circumstances (FAO, 1999).

The following chapter focuses on community participation in land resources conservation in some developing countries. Attention is also focused mainly on land resources conservation activities carried out jointly or individually by governments, international agencies and local communities

CHAPTER THREE

AN OVERVIEW OF COMMUNITY PARTICIPATION IN LAND RESOURCES CONSERVATION INITIATIVES IN DEVELOPING COUNTRIES

1. INTRODUCTION

The increasing rates of land degradation in sub-Saharan African countries where lands have low regenerative capacity, have stimulated arguments in favour of land resources conservation. Some such arguments touch on ethical values, aesthetic benefits, cultural and scientific values, material benefits, ecological balance and life support systems. Others include moral and social values present in religious doctrines (see Barrow, 1993; Barkham, 1995; Callicott, 1995; Claassee, 1996; Fox, 1995; Hittingh, 1999; Jantzi *et al.*, 2002; Linden, 2002; NES, 2002; O'riordan, 1995; Passmore, 1974 & 1980; Preston-Whyte, 1995; Taylor, 2000; Wilson, 2000). These arguments have received corresponding responses from governments, international organisations, non-governmental organisations, community-based organisations, private bodies and individuals. Much was said about community participation in Chapter One without some detailed clarifications about its typology and characteristics. The purpose of this clarification is to determine the level of participation which conventional approaches allowed, and the level of participation expected in the proposed community-based conservation approaches. This chapter is made up of four sections. These include a section on types and characteristics of community participation; a section on case studies of conservation management activities in developing countries; a section on limitations to community participation; a section on the means of ensuring effective community participation. The purpose of the latter is to determine how stakeholders have tried to actualise participatory approaches in the past and in the ongoing conservation attempts.

This chapter also examines corresponding land resources conservation attempts in some developing countries. While examining these attempts, focus is directed at conservation attempts made by the international organisations such as GEF, UNEP, UNDP, governments and local communities. The chapter also examines perspectives of community participation. Some requisite conditions that need to be put in place to ensure good practices of community-based conservation are also examined.

It is expected that the knowledge of the requisite conditions may help not only to avoid the inadequacies in the conventional approaches but also prepare practitioners for good practices. It is expected that the experiences from the empirical case studies drawn from Africa and Asia, and particularly the joint management experience in some developing countries, will be brought to bear in the joint responsibility type of conservation approach. The choice of selected conservation attempts in this chapter is purposely made to learn from the experiences in Africa and Asia. Relevance, focus of project, stakeholders' involvement and availability of information and so on, have helped to determine the choice of conservation attempts. (see Annexure 3 for the map of Africa and Asia showing countries selected for study). In this chapter, reference is made to Africa and not sub-Sahara Africa. Minimums of 2-3 case studies are purposefully selected from the east, north, south and west of the continent. In the case of Asia, because the continent is not the focus of study, four case studies have been again purposely selected from the central region of Asia the same way case studies have been selected in the different regions of African continent.

The next preceding section examines perspectives on community participation in conservation activities.

2. TYPOLOGY AND CHARACTERISTICS OF COMMUNITY PARTICIPATION

A host of conservation practitioners agree that appropriate community participation ranges from non-participation through informing and consulting to citizen control. While

some classify participation into four concepts, which include information sharing, consultation, decision-making and initiating conservation action others simply classify participation into cheap labour, cost sharing, contractual obligation and community decision-making concepts (Whiteside, 1998). It has been argued that conservation project managers seize the opportunity of available cheap labour in the rural communities to reduce project cost while information sharing and consulting are also less than adequate means of participation. However, there are instances where informing and consulting with the potential land users can be sufficient. The optimum level of community participation is that which gives communities sufficient control over their environment, while at the same time sustaining the resources expanded by a community in exerting that control (GoL, 1998). What is important to note is that every community has different views on the degree(s) and type(s) of participation and on their appropriateness and adequacy. In any case, the community's willingness and ability to participate in conservation activities depend on numerous factors. These are addressed later in this section.

Meanwhile, worldwide experience suggests that conservation projects which have included communities as partner participants at all stages of project development and implementation imply real community participation. Community participation at the level of decision-making ensures sustenance. Thus, the earlier community participation is established in a conservation project, the greater the chances of ownership of land resources are established, the greater the likelihood of a successful and sustained land management and conservation is ensured. The process, where communities provide labour and or materials and where decision-making thus becomes the responsibility of professionals/government officers, negates real community participation. Community participation is perceived at different and various levels. Whiteside (1994) classifies participation into passive, information giving, consultation, incentive induced, functional, interactive and self-mobilisation types of participation. The above classifications of participation are explained in sub-sections 2.1 through 2.7.

2.1 Passive participation

In passive participation, communities participate by being informed about what is going to happen and about that which has already happened. The passive type of participation is recognised by its unilateral announcements by land conservation project management without their either listening to or considering the community's responses. In this case, information shared by communities about conservation projects comes only from external professionals and/or government officers. This type of participation has led to conflicts between local communities and government officers, which consequently resulted in the abandonment of government conservation projects.

2.2 Participation in information giving

This happens when communities participate by responding to questions passed on to them by researchers. These are usually done as baseline surveys carried out during the process of identifying priority development projects. Communities do not have the opportunities to share in the outcome of such government sponsored researches, because the findings are neither shared nor verified by communities for accuracy of information given by individual community members. This is a wrong approach and does not represent real community participation. This poor practice has helped to increase the rate of conflicts between local communities and government officers and has also contributed to failures of several conservation attempts and projects.

2.3 Participation by consultation

This type of participation only entitles communities to be consulted by government officers who identify and define both conservation problems and the solutions. The consultative process does not concede any share of decision-making powers and opportunities to local communities. Therefore, conservation professionals are under no obligation to take on board the community's views. This conventional approach contradicts good practices offered by community-based conservation approaches because mere consultation neither empowers nor generates sufficient incentives for community participation.

2.4 Participation for incentives

In this case, communities participate by providing resources such as labour in return for food, cash and/or other material incentives. Much on-farm research falls into this category because farmers provide the fields, but in most cases are not involved in the experimentation or the process of learning. It is very common to accept this level of community involvement even when communities have no stake in sustaining conservation activities when provision of incentives ceases. The food-for-work and cash type of incentives do not guarantee sustainability and also do not go down well with community-based practices which depend wholly on community commitment and total self-reliance.

2.5 Functional participation

Functional participation allows communities to participate by forming groups to meet externally predetermined objectives that relate to community land conservation projects. This type of participation does not start in the early stages of conservation project cycles; rather, it starts after major conservation project implementation decisions have been made. In this atmosphere, conservation groups tend to depend wholly on external conservation initiators and facilitators. However, this participatory process sometimes leads to self-dependence. Functional participation encourages interest groups with diverse views and interests; it is also accepted as a starting point to actualise community-based conservation programme.

2.6 Interactive participation

The interactive type of community participation permits communities to participate in joint analysis of the land degradation situation, which leads in most cases to conservation action plans. The interactive process involves interdisciplinary methodologies that sometimes seek multiple perspectives. It also employs systematic and structured learning, and in some cases capacity-building processes. In this process responsibilities are shared and conservation groups take control over decisions that relate to conservation activities, as well as management. This level of community involvement guarantees that

people have a stake in maintaining conservation structures and practices that are in keeping with sustainability. Interactive participation is positive for local communities if they are initiated into the process from its commencement through to the completion stage.

2.7 Self-mobilisation

Here the community participates through self-mobilisation, which involves taking conservation initiatives independently of external institutions. In this way, community conservation priority needs are initiated. This practice offers communities the opportunities to develop contacts with external institutions for support while still retaining control over land management and conservation. Contact with external institutions facilitates a community's conservation initiative as well as fostering capacity building. Self-initiated land conservation programmes and self-mobilisation for collective actions are appropriate conservation practices that would ensure successful community-based conservation programme. This type of community participation also ensures sustainability of a conservation project. If communities are not self-mobilised and community priority conservation needs are not considered as foremost priorities, it follows that sustainability of the conservation project is unthinkable.

The dominant types of participation in developing countries are: passive; information giving; consultation; incentive, and functional participation. The types and characteristics of community participation having been discussed, I next give an overview of conservation management programmes in developing nations.

3. THE NATURE OF CONSERVATION AND MANAGEMENT PROGRAMMES IN DEVELOPING COUNTRIES

The growing body of empirical evidence now indicates that the transfer of Western conservation approaches to developing countries has indeed had adverse effects on the food security and livelihoods of people living in and around protected areas and wildlife

management schemes. Thus, the conventional style of protected area and wildlife management usually results in high management cost to governments, with the majority of benefits accruing to national, international and external interests (FAO, 1999). It has also been acknowledged that those living in and around conservation areas have been overlooked both during the planning and the management phases of conservation projects (Summers, 1999). Indeed, people who live closest to such areas that are richest in biodiversity are sometimes economically the poorest (Borocho, 1998). Denying land resource use to local people reduces incentive to conservation (Cock & Fig, 2002; Dladla, 1998; SANP, 2000; Sondergaard, 2000).

The management of protected areas has also resulted in conflicts, causing more harm to bio-diversity than before Bhatt, (1998). The conventional approaches to protected areas (PA's) management is therefore no longer working. In the past, it was believed that professional advice equipment and funds, combined with the top-down approaches of governments, non-governmental organisations and donors would work conservation magic. However, history has proved that much of this was wrong. The approach has rather resulted in wasted resources and costly failures. Bhatt (1998) indicates that the concept of conservation and management of land resource needs to be re-examined and suggests innovative alternatives to conserving such areas. Borocho (1998) goes further to stress that conservation managers should do more jobs as catalysts and facilitators to assist the farmers in support of their particular conservation aspirations.

Besides managing and conserving protected areas, Anna (1991) notes that land users have often been viewed as part of the conservation problems rather than part of potential solutions. The local people have either been paid or forced to participate in conservation projects carried out by governments (UNEP *et al.*, 1998). Some have been reported, often not to have understood government conservation schemes, and they were far too concerned with the daily struggle to produce enough food to eat, to pay their debts and to meet other commitments to be interested in imposed conservation programmes (Botha & Fouch, 2000; IUCN *et al.*, 1998; UNEP *et al.*, 1998 & 2000;). It is now widely

recognized that for land conservation to be successful it has to be willingly undertaken by farmers and farming systems made an integral component of a productive farming system rather than as a separate land management practice.

The deep conservation crisis and the top-down approach imposed on communities have necessitated the need to search for alternative approaches to land conservation (Ghimire & Pimbert, 1997; Pimbert & Pretty, 1998). Already, community involvement has received attention from international and national conservation organisations. The most important consideration for real community involvement is that the conventional approaches have remained problematic, and unsustainable. The assumption has been that the whole process of conservation ought to lead to local institution building, thereby, enhancing the capacity of local people to take action on their own. The above, implies that the existing official conservation institutions and professionals need to shift from being project implementers to new roles which facilitate local people's conservation analysis, planning and action (Borocho, 1998; FAO, 1999; UNEP, 2002). Where this happens, it is expected to bring in a new professionalism where conservation experts will be required to learn and accept traditional conservation technologies and indigenous knowledge and where necessary, initiate a process of blending both scientific and traditional conservation technologies.

Issues that impinge on the practice of community-based conservation programmes can therefore be deduced from the ongoing management of conservation initiatives in developing countries. However, it may also be necessary to ask the following questions at this point. Firstly, do local communities have all it takes to sustain land resources conservation programmes considering the time it takes, the patience, financial and material resources required? Secondly, do local communities have the capacity to practice community-based conservation? Thirdly, would the governments' technical assistance be adequate enough support to local communities? Fourthly, can the government also provide capacity building requirement to all local communities considering local communities' position about long-term land resource projects? Fifthly,

what could be other kinds of assistance that the local communities would require from government and donors to get involved in conservation activities? The above questions remain central issues in this study and these are given attention in this chapter and in Chapter Four.

The above has highlighted the nature of conventional management and conservation of land resources in the developing nations. The next section discusses a few case studies taken from Asia (see Annexure 3 for map indicating the areas). The selected case studies discussed can be seen in section 4 through sub-sections 4.1 to 4.4.

4. THE ASIAN EXPERIENCE OF LAND RESOURCES CONSERVATION

In Asia, conservation attempts have been selected mainly from Central Asia. These are briefly discussed under sub-sections 4.1 to 4.4.

4.1 India: Land rehabilitation work

A study of land rehabilitation work carried out in 82 villages in different parts of India by Abrol & Sehgal (1994) reveals an uncontrolled disappearance of a number of plants and trees species in the areas. The study points out that land degradation continued in these areas primarily because of the huge populations of livestock and the associated uncontrolled grazing and foraging that was far in excess of capacity. This is arguable, considering India's rural and urban population and the importance the people attach to the keeping of animals and the socio-economic roles which animals play (Ayoub, 1999; UNEP, 2002; Whiteside, 1998). The study further reveals that most farmers abandoned their lands after they had repeatedly changed from the initial crop they were producing, to produce more climate tolerant crops like rice (Abrol & Sehgal, 1994).

The small-scale farmers were often reluctant to comply with conservation measures such as realigning their plot boundaries to conform with acceptable contour grades and to have bunds within their fields because bunds take a considerable part of their land out of cultivation (Abrol & Sehgal, 1994). The reluctant attitudes of the people to accept

conservation measures demonstrate the fears the study has about the knowledge rural communities have about modern conservation measures. It is known that a small-scale farmer is only interested in improving the production of his food grains and income rather than in conservation and complying with conservation measures. Therefore, unless the farmer is convinced that land resources conservation will improve his production or in some other ways help him to make a better use of his investment, efforts at reducing land degradation are not a high priority (Abrol & Sehgal, 1994). But if a farmer is made to realise that the benefits of complying with conservation measures is worth more than the area of his farm land lost to such measures, he is very likely to comply because of the expected reward and improved output. Thus, this may have been because farmers were not convinced of the benefits accruable to them and again, because they had limited resources to engage in the maintenance of conservation structures. Besides, selected unemployed individuals were involved in the conservation programme and this only provided them with temporary employment. This practice is identical to the on-going UNDP Environmental Management for Poverty Reduction (EMPR) Project in Lesotho as discussed in Chapter Four.

- **Lessons learnt from land rehabilitation work in India**

In India, farmers saw the conservation programmes as activities that provided temporary employment to the rural unemployed rather than activities which developed cropland and raised productivity. Comparatively, the programmes' components are similar to the EMPR Project in Lesotho, which tries to conserve land through unemployed youth school dropouts, thereby capacitating them for conservation tasks. Participation in these projects is selective and therefore does not represent good practices, which should aim at community-based approaches. Apparently there was a lack of outreach programmes to educate the farmers about the project's components and its usefulness. It therefore means that one of the wisest steps would have been to conscientise and educate the land users about the positive and negative effects of their actions on land. In the programme, powers were concentrated amongst landowners and the privileged few. The conservation activities also excluded the entire population of lower caste and tribes in the management

committees of conservation projects (Isaac & Mohamed, 2002; Kothari, Anuradha & Palthak, 1998; MaJumdar, 1994). Kothari, Anuradha & Palthak (1998) say that a single powerful individual can undermine the process of conservation, especially if such an individual enjoys connections with powerful outside forces. The situation becomes worse when those chieftains who had contacts with the kings, politicians and traders would sell off lands and forest that their communities depended on. From the project experience, it has been established that increasing individual autonomy, lack of knowledge, the impracticability of modern environmental measures, the exclusion of lower castes and tribes have contributed to the breakdown, the collapse of collective action, and the eventual failures of land resources conservation programmes.

4.2 Pakistan: Preserving Biodiversity and Landscapes Project

Pakistan has a terrain with extremely high diversity of habitats and large numbers of species found nowhere else in the world. There are over 1000 species of plants, including wild relatives of apricots, walnuts, and a host of medicinal plants with pharmaceutical potential (GEF/UNDP, 2002). Threats to this biological heritage include degradation of high pastures, forest stands, overhunting and overgrazing. Due to rapid human population growth and weakening of traditional common property management systems, traditional conservation and rangeland management techniques have broken down in the area. In response to the degradation, GEF/UNDP jointly sponsored a project, with a focus on ecological landscape management. The project created four large conservancies that span an area of some 163000km² (GEF/UNDP, 2002). The project's main thrust was engaging local communities through village conservation committees in the planning and implementation of conservation activities.

The project management involved not only local leaders but also local women in decision-making processes. The project also employed integrated traditional knowledge and systems in its operations. The involvement of women in conservation issues in Pakistan as demonstrated in this project is particularly exemplary. It is exemplary because the people of Pakistan, based on their religion, Islam, frown on women's

activism. The project provided diverse economic benefits to communities through provision of eco-tourism, sustainable small game and bird harvest, and non-timber forest products, and so on. The project also established village conservation funds, which allowed such funds from sustainable harvest of wild resources to be invested in income redistribution for community services and small infrastructural projects.

- **Lessons learnt from Preserving Biodiversity and Landscapes Project in Pakistan**

One of the lessons learnt here is first, that even if traditional common property systems have disappeared in an area, it is nonetheless possible to replace such systems with new forms of common property management to promote sustainable land resource management practices. Second, that if women can be brought out of their religious, secluded type of life styles in some households in Pakistan to participate in conservation activities, then, elsewhere in the world where women are not thus forced into seclusion they can easily be mobilised to participate. Third, that the experience of one region can be successfully practiced in another region. This means that even if a common property management system has broken down in a particular area, alternative forms of management style practiced elsewhere can be introduced and practiced successfully. What is important therefore, is to design ways and means of attracting people centered management styles, while implementing community priority conservation projects.

4.3 Turkmenistan: Human interventions to Tedzhen ecological disaster

The ecological degradation of Tedzhen in Turkmenistan and the human interventions were of interest to this study because, they reveal some broad factors that stimulate land degradation. According to Kharin (1997) flat topography, heavy mechanical composition of soil, salinisation, waterlogging, insufficient lengths of drainage network and overgrazing of rangelands are some of the factors that stimulate land degradation. Other factors include: drainage constructed to earth's beds; the use of heavy tractors; the absence of crop rotation and manure; planted trees and shrubs which dies under conditions of saline soil and saltised ground water.

Kharin (1997) however, failed to recognise that, as people migrate from a particular place, such exhausted lands are left fallow to experience the process of natural rehabilitation and reclamation. This period of being left fallow is a necessary condition for the natural process of rehabilitation and reclamation. Both government officers and local inhabitants require this knowledge and understanding of natural rehabilitation processes. The concern of this study is that the natural rehabilitation process was neither visible nor progressive. This can be attributed to the poor level of peoples' involvement in the processes. It could also have been attributed to the fact that, as people migrated, others immediately occupied such lands. The tenure system allows this. In the absence of the impact of human population, livestock farmers continued to graze animals on such fallow lands. Water and wind erosion also had much impact. What must be done to strengthen the natural reclamation process is to activate human support mechanisms.

- **Lessons learnt from human interventions in the Ecological Disaster Project in Turkmenistan**

The major lesson learnt in this study is that lands left fallow need not be treated as abandoned lands. Such lands require human reclamation interventions and support. Total neglect of such lands expresses people's ignorance about land resources regeneration and rehabilitation measures. Human support mechanisms are needed to ensure the survival of natural process of land rehabilitation. A mere period of fallow does not really ensure immediate and/or short-term natural rehabilitation of degraded lands. The negative impact on land caused by refugee settlements should now be recognised because of the increasing incidence of refugee settlements in Africa. Therefore, the process of land resources conservation should also consider the negative impact of land resource degradation caused by the induced migration of people.

4.4 Nepal: Annapurna Empowerment Conservation Project

Annapurna Empowerment Conservation Project in Nepal had a policy of giving preferential employment to local people. The project had both conservation and income generation components and attracted a high level of people's involvement. This policy of

preferential employment was targeted to establish a people-oriented type of project. The project components exposed local people to different conservation training programmes. GEF/UNDP (2002) revealed that 65% of the project staff were local people, and, of these, 19% were women. The conservation and development committees (CDCs) of the project were authorised to issue permits to people to harvest timber or non-timber forest products for payment of a fee. The committee also charged people for illegal hunting, fishing and felling of trees. All the revenue collected from the initiatives was kept in the CDC fund for use for conservation and development activities in the area. Fees were introduced to raise funds to sustain development and conservation activities. The fee which the project charged remained significant because it entrenched the value of land in economic terms rather than inculcate into people the attitude and strong belief that land is a free gift of nature and therefore, should not be valued in economic terms. Above all, the projects incentive component attracted reasonable community participation.

- **Lessons learnt from Annapurna Empowerment Conservation Project in Nepal**

No matter how attractive the project incentives were, such incentives limited the number of participants. This was because only beneficiaries participated in the project. The incentive package aimed at only selected participants instead at the beneficiary community. However, the revenue generating components designed to sustain the project and other allied development activities is a lesson that needs to be replicated elsewhere. Noteworthy are some of the sustainable project practices. For instance, the project offered to replace the trees harvested, as an act of reforestation. (The act of deforestation for development of other sectors in a way actually means an act of “robbing Peter to pay Paul”). Yet all, the project did not also meet the standard of community-centred conservation programme, which it was designed to practise.

5. THE AFRICAN EXPERIENCE OF LAND RESOURCES CONSERVATION

In an exploration of the African experience in land resources conservation activities, this study purposely selected cases from the west, east, north and south of the continent for

study. In the west, Nigeria, Niger, Senegal and Mali were selected, while in the east, Kenya, Tanzania and Uganda. Sudan, Madagascar and Morocco were selected in the central and north Africa. Zimbabwe and South Africa were studied in the south.

5.1 Nigeria: Forestation project in Kano and Jigawa states

The Nigerian government and the local communities in Kano and Jigawa states implemented a forestation project with funds from the World Bank and the project hosts. Kano and Jigawa states are in the northern part of Nigeria and the area has low rainfall and poor soil fertility and lies in the Sudan Savannah zone. As a result of the geographical zone of both Kano and Jigawa states, the area suffers from low vegetative cover, severe wind and water erosion, and arable land decreases as a result of extensive grazing in the area. The forestation project was therefore initiated to address the degraded land. In remedying the situation, the project implemented an integrated, multi-pronged approach to forestation, which combined shelterbelt, windbreak, wood lot and orchard creation with natural regeneration (UNEP, 2000). The project components were targeted to increase fuel wood, construction timber supplies and to provide additional fodder. It also offered incentives to farmers, promoted community mobilisation and involvement in forestation activities. The controlled access into shelterbelts was ensured by the introduction of guards into the project management structure.

- **Lessons learnt from the forestation project in Kano and Jigawa states in Nigeria**

The project was able to increase vegetative cover and it improved the soil fertility of the project area through farm-based activities. It increased fuel wood and timber availability both for use and for sale. It also generated income for the people by providing people employment opportunities. Community organisations were encouraged by the credit facility made available to the people through farmers associations. The project also gained support from different levels of government through extension services and training inputs. Support for the project from traditional leaders (the Emirs) encouraged massive local community participation. It must especially be noted that, apart from the support received from both the government and traditional leaders, that the project's policy of decentralisation of powers to the level of the local community worked well.

Also, individual farmers embraced the project initiative after having learnt from the project's demonstration/pilot projects. The common problems, experienced in similar projects such as conflicts, infighting, and domination by government officers did not feature. The project, therefore, remained an exemplary project for the successful implementation of joint management, which is being replicated in some neighbouring communities in Nigeria. Above all, the co-operation exhibited by local communities and government officers in the project remains healthy and worthy of emulation for the survival of similar conservation projects. Therefore, successful entrenchment of community-centred approaches into conservation initiatives, as practised in this project, need to be replicated by other conservation programmes initiated by both government and local communities.

5.2 Niger Republic: Experience of land conservation

A study on Niger Republic by the FAO (1999) revealed how badly central southern Niger, the *Keita Valley*, was pressured into desertification due to increased population. According to FAO (1999), less than one-fifth of the province's land has been degraded. The degradation resulted in scarcity of land and in the fragmentation of lands. The marrying of old and new technological initiatives, as well as the joint management by the Food and Agricultural Organisation, the Niger Republic Government and the beneficiary communities are of particular interest to the present study. The project's technology was to ensure that water stays in the soil where it falls, rather than running off to cause damage on land elsewhere. The integrated development project was designed to rehabilitate the degraded Keita Valley. During the project implementation, the people were made to carry out the routine work of checking conservation work as well as maintaining conservation structures. Based on the level of the people's involvement in the project, a new community spirit was born, high levels of vegetative cover and crop growth were achieved in areas where there were dunes and rocks.

- **Lessons learnt from land conservation in Niger Republic**

The successful marrying of old and new technologies was turned into a simple idea which needs to be replicated elsewhere, particularly in a country like Lesotho. Aggressive opposition to a top-down approach was also a crucial step in the project yet, the move to displace and restrict the influence of professionals in the project was too drastic. Empowerment, decentralisation and involvement of people are nevertheless paramount, but the role of experts in conservation cannot and should not be completely ignored. What is needed is an integrated approach which focuses on mobilising local people with their practical conservation initiative and knowledge in the process. No doubt, the successful integration of proven conservation expertise and local knowledge is very likely to yield good results and also ensure the sustainability of conservation initiatives.

5.3 Senegal: Ecosystem management

Senegal experienced severe land degradation in the savanna and dry forest due to expanding human settlement increasing cultivation, logging and deforestation, excessive fuel wood harvesting and uncontrolled bush fires. Mangrove harvesting also reduced the mangrove cover by 10% yearly. Indeed, combinations of the above factors resulted in the degradation of 250,000 hectares of savanna and 80,000 of Senegal rangeland yearly (GEF/UNDP, 2002). As a result of the escalating land degradation, GEF/UNDP launched a community-based Integrated Ecosystem Management (IEM) of four landscapes selected to represent the four major Senegalese ecosystems. The landscapes purposely consist of three inter-linked units, which include protected area, community nature reserves, and village territories. The project applies the model of integrated community-based conservation approaches. The project's integrated approaches encourage decentralised structure which permits three inter-related benefits to include conservation of biodiversity, mitigation of land degradation and partnership of local communities, government, and bilateral and multilateral donors. In fact, a joint management system was established by incorporating all stakeholders.

- **Lessons learnt from ecosystem management in Senegal**

The project could have been a total failure if planners had excluded the people and other stakeholders from the process. Not much was known about the project's achievement on the ground, but the experience of successfully working together (joint-management) between the government and local communities in a government-initiated conservation programme remains a lesson. This can be done elsewhere as long as good practices are kept in principle and in practice.

5.4 Mali: Conservation Capacity Building Project

With financial support from the Norwegian Government and the United Nations Development Programme the International Labour Organisation (ILO), and the Forest and Water Department of Mali, implemented a capacity building project in the Kita district of the Republic of Mali. One of the objectives of the project was to strengthen the organisational capacities of the population to enable the people to take more responsibilities for the management of their land. Thus, the project gradually introduced the rural populace to forest management and exploitation, which was initially under the complete control of the Forest Office. Within a few years of the project's inception, the village associations could buy a permit to cut and collect wood in the classified or protected forest area, provided that they agreed to respect the instructions specified in the contract. The permits provided for a levy on the wood extracted. Such levies contributed to the development of forest management and community development funds (ILO/UNDP, 1995). The benefits of the sustained forest utilisation spread to the wider community while also, increasing rural incomes and employment opportunities (ILO/UNDP, 1995). The project did not only concentrate on capacity building of the local communities, but it also resulted in sustained conservation aided by income-generation programmes, the proceeds at which are routinely re-invested into conservation activities.

- **Lessons learnt from Conservation Capacity Building Project in Mali**

One of the important lessons learnt in the project's implementation is the outcome of the income-generating and fund raising components, which led to eventual project sustenance as well as further rural/community development activities in the area. It also shows that local communities can successfully carry out conservation programmes with technical and financial support from the government. A few success stories of co-management of this nature give clear indication that community-based land resources conservation can be successfully practised if all the necessary processes, tool, materials, funds and human resources available are mobilised advantageously.

5.5 Kenya: Protection of ancestral Ogiek forest

The eviction of Ogiek community in Kenya from the forest area where they had lived for a hundred years attracted this study. This is because of the study's quest to determine the relationship between local communities and government with regard to conservation activities. The study also wanted to examine the benefits derived by those who live closest to nature reserves and how external stakeholders treat them. Ogiek community took Kenyan Government to court in the year 2000 (Wily & Mbaya, 2001). The Ogiek community gathered support from several human rights groups in Kenya and all others who condemned the government's act of deforestation on their protected ancestral trees, home, land and their bee-keeping interests. As record has it, the Government of Kenya gazetted the Ogiek forest as protected area only one year before the eviction notice was served on the tiny Ogiek community (BBC, 2002).

The decision to evict Ogiek community was solely and unilaterally governmental (BBC, 2002; Wily & Mbaya, 2001). In an ideal situation, the government would have dialogued with Ogiek people to suggest and propose a possible relocation programme instead of the forceful eviction. Beside the sudden act of eviction, it is noted with regret, that no environmental compliance measures were proposed to re-afforest the land area which the Kenyan government intended to destroy. The value of the protection the Ogiek community provided to the forest for about 70 years was minimised in that government

exaggerated the loss of forest (Wily & Mbaya, 2001).

- **Lessons learnt from the protection of ancestral forest in Kenya**

Ogiek's protest through the courts alongside the public outcries to solicit public support are civilized attempts to mobilise for community participation. As a result of the apparent lack of trust on the governments genuine support for conservation, Ogiek community were very fearful that they may not be resettled in a habitable environment. The Kenyan Government is unlike the Indian Government which employs some good practices of re-forestation development of equal size to replace any forest destroyed for development purposes. The study therefore argues that the Kenyan Government should emulate the Indian Government and should also provide alternative forestation programmes to replace any forest destroyed, so as to avoid protests and conflicts between local communities and government agencies.

5.6 Kenya: Turkana land management and conservation

Darkoh & Hjort-of-Ornas (1996), who studied Turkana land management and conservation, drew people's attention to the role and potential of rural producers and local organisations in land management. The Turkana project employed the traditional approach to land management, while focusing on the pastoralists in northern Kenya. The project design showed a complete shift from the autocratic nature to land management, to a community-centred approach which promotes traditional knowledge and mechanisms that were formerly lacking amongst local community members. The lack of knowledge about the traditional measures was attributed to earlier colonial pressure and domination. While the Turkana project advocated for the promotion of indigenous knowledge, as well as grassroots conservation initiative, it was identified that land tenure systems, customary laws and property rights are some of the problems that hinge on community participation (Darkoh & Hjort-of-Onas, 1996). The study of the Turkana conservation project depended solely on primary sources of data to identify the roles the local communities could play in land management and conservation.

- **Lessons learnt from Turkana land management and conservation in Kenya**

Despite the role expectations of Turkana local communities, the study failed to offer solutions as to how Turkana communities could be involved in land resource management. This study has established that, unless the local people are brought in to participate at the right time, securing actual community participation in a conservation project may remain problematic. One of the lessons also learnt in the Turkana project is that there is hope that indigenous knowledge can be successfully used to tackle land degradation problems if communities are properly mobilised, capacitated, reassured and given some confidence that they can be dependable. Above all, it is also necessary to further extend outreach programmes to local communities, focusing on conservation measures and providing them alternative good practices to conservation.

5.7 Tanzania: Community-based land conservation

In Tanzania, Arusha and Singida villages developed land management and conservation strategies that are based on geographical and political divisions. The project made demarcations of each village forest into sustainable use, grazing and protection zones. Communities within the project areas provided guards who patrolled round the forest. Each village also elected a village forest committee to promote forest management. Plans and rules were laid down to promote and protect the forest and these were incorporated into individual village by-laws (GEF/UNDP, 2002). The outcome of the high level of community participation in the projects is that the known destructive activities such as encroachment and charcoal burning in the protected areas were stopped without the government and the sponsor agencies having to spend much. The involvement of the entire community, and the freedom the local communities had to institute committees with shared responsibilities are part of the good practices of managing and conserving of land.

- **Lessons learnt from community-based land resources conservation experience in Tanzania**

The willingness of the people to participate without much in the form of financial incentives is an especially noteworthy lesson. This may be attributed to the fact that the project is a purely community-initiated project. The project did not provide any immediate reward, yet much was derived from forest development programmes. Land for forest development did not pose a problem and government institutions also did not make draconian policies restricting community participation. The impact made by the project acknowledges the arguments that land scarcity, inadequate benefits sharing, and governments' conventional and autocratic approaches hinder community participation in conservation programmes.

5.8 Uganda: Park management experience

In Uganda, the links between environment and population densities surrounding parks was addressed by the Cooperative and Relief Everywhere (CARE) project in the Bwindi and Mgahing National Park areas. The integrated conservation project was started when the people realised that conservation of the areas would be impossible if the local population continued to grow at the usual rate of between 2-3% per annum (UNNGLS, 2000). Due to the population growth rate, an area was marked out from the protected areas for farming. The measure provided the people adequate area to farm without further trespassing into the protected zone. The revenue generated from entrance fees, guide fees, camping and gorilla tracking in Bwindi Natural Park are used to support community development projects in the 21 Parishes surrounding the park (UNNGLS, 2000). The Park Management Advisory Committee (PMAC) allocates funds to projects that are viable and that meet the budgetary allocation of the park. It also considers those projects which are in compliance with the environmental objectives of the area. These ensure the sustainability of the national park.

- **Lessons learnt from park management experience in Uganda**

Conflicts between the people and park management are avoided and project sustenance is assured as a result of peoples' real involvement. Worthy of emulation is the act of utilising funds generated from parks for the development of the project area. The project is also in line with the popular villagisation programme in Uganda where people were resettled on virgin lands. Despite the problems that emanated from the exercise, it served as a genuine means of sustaining land resources. The model also encouraged the idea of opening up new and virgin land for settlements with conscious environmental compliance and concerns. It is therefore learnt that the model is both futuristic and sustaining. It is also a shift from the unplanned settlement pattern of over-crowding a particular place and thereby putting much pressure on the available land. The lesson is that providing too much land for conservation without enough being suitable for human survival can also jeopardise conservation attempts. The success of the project makes it replicable in Lesotho.

5.9 Sudan: Rehabilitation of community rangelands

Sudan's rangelands cover over 60% of the country's total land surface. The rangelands feed the largest population of livestock in Africa (GEF/UNDP, 2002). The rangelands were severely degraded as a result of overgrazing, which resulted in the decline in livestock production in Sudan. In general, Sudan's vegetation also experienced overharvesting of forest products such as timber and fuel wood. Also, as a result of the overharvesting, GEF/UNDP set up a rehabilitation project to help the local inhabitants of the areas to rehabilitate particularly their rangelands. The rehabilitation project relied largely on the capabilities of the local communities. The project also laid emphasis on ensuring the participation of women and the poor. On the whole, the project engaged 73 technical assistants and 2400 local participants (GEF/UNDP, 2002). Individual grazing allotments were made while strengthening local capacities and legal rights for rangeland monitoring and management. To reduce the pressure on cultivated lands, the project provided alternative sources of income to local communities as incentives to participate in the project. Such incentives included: providing a revolving cash fund to secure better

quality seedlings, bore holes and installation of water pumps to reinvigorate the women's home gardens which supplement diets and incomes. Specific land rehabilitation activities in the project include the planting of trees and grasses to create 195 km of stabilising windbreaks, developing community-based land use management plans and so on (GEF/UNDP, 2002).

- **Lessons learnt from rehabilitation of community rangelands in the Sudan**

The lessons learnt in this project are the following: firstly, that the people can convert marginal agricultural land to rangelands; secondly, that the people can control land degradation, especially when sustainable incentives are made available to them; thirdly, that the participation of women and the very poor are important in any land resources conservation project. Successes were recorded despite the fact that the project was not locally initiated. It is therefore noteworthy that the level of cooperation between the people and the project officers deserves to be replicated in other conservation projects around sub-Saharan Africa. It could possibly have been a total failure if the local communities had not been brought into the project at an earlier stage. Above all, the sustainable type of incentives (income generation scheme) offered by the project helped to sustain people's participation in the project.

5.10 Madagascar: Sustained conservation

UNEP (2002) reveals that the people of Andranomalaza in Madagascar were stopped from collecting honey in Zahamena Integral Natural Reserve (ZINR) because the reserve authority realised that the people were causing bush burning in the process. Instead, the people were helped by the park authority to develop bee-keeping techniques outside the reserve. One of the activities of the Zahamena Conservation Area Project (ZCAP) was to increase the greenish or vegetative cover through a community plantation programme in the fallow and in community lands. The local communities graze their livestock in the fallow lands but once an area is designated as plantation, access to free grazing of livestock on such land is lost. In such a situation new land for grazing is provided, this is being done to compensate both those who harvest grasses and others who are directly

affected by the development.

- **Lessons learnt from a sustained conservation project in Madagascar**

The alternative bee-keeping initiated outside the protected area is an accepted means of averting human-induced degradation in a protected area. Again, the compensational measure for lands acquired for other developmental purposes, as practiced in India, also promotes sustainability of land resources. The projects' implementation also gives the neighbouring communities reassurance and confidence in the manner government adhered to conservation principles while also looking to the welfare of local inhabitants rather than only the protection of forest and wildlife.

5.11 Madagascar: Land management experience

Madagascar has been selected for scrutiny because of its high rates of deforestation and government attempts to create national park reserves and sanctuaries. The plan was carried out principally to reduce conflicts over parks and reserves. This was also because it had been observed that local communities in Madagascar were neither consulted during planning process, nor reaped the benefits of park reserves and sanctuaries. Instead, the local communities were considered to be the principal agents of reserve destruction (Ghimire, 1994). The two national parks studied included: Mananara Biosphere Project and Montagne d'Ambre National Park in Madagascar. Mananara Biosphere Project was started in 1988. It is located on the northeast coast of Madagascar and is spread over an area of nearly 140 000 ha. Montagne d'Ambre National Park acquired national park status in 1958. It is located in the extreme north of Madagascar and has 18 200 ha, excluding the buffer zone.

Local communities in Madagascar have experienced increasing restrictions on their forest areas, and the priorities of the park authorities clearly do not correspond to the need of the local inhabitants. Most of rural dwellers lack the political means to advance their interests effectively and there has been prolonged discontent with the management of reserves in Madagascar. However, this is not peculiar to Madagascar only (see

Boonzaaier, 1998; Cock & Fig, 2000; Dladla, 1998; Ghimire, 1994; Hoare & Du Toit, 1999; Mohammed, 2001; Sibanda, 1996; and Summers, 1999).

- **Lessons learnt from land management experience in Madagascar**

Some of the lessons learnt are that the consequence of the non-involvement of local communities in managing national parks, reserves and sanctuaries is that the government needs to spend considerable sums of money in administering and policing such areas. This, therefore, implies considerable financial pressure on the government. By involving local communities in park management activities, the costs of policing are reduced (Ghimire, 1994; Mohammed, 2001). It has also been learnt that for effective management to be effected, increasing the number of trained forest guards becomes essential, and radios, automatic weapons, vehicles and helicopters have to be procured, (Ghimire, 1994). In fact, real mobilisation towards community participation would be cost effective. It would also be more practicable and workable, and this would then ensure the sustainability of the conservation project.

5.12 Morocco: Empowering traditional pastoralists

In the high Atlas Mountain of Morocco, the type of settlement of people caused dramatic deterioration of habitats. The rate of deterioration of habitats experienced was a result of over-cultivation around the settlements. This eventually gave rise to the conversion of rangeland to marginal cropland. Moreover, reduction of livestock mobility and fuel wood extraction in the area also resulted in indiscriminate access to pasture which resulted in escalation of overgrazing and also in unsustainable settlement in marginal lands. Due to these problems, GEF/UNDP designed a project that allows people to settle on appropriate and habitable sites while keeping their livestock moving. The project emphasises traditional expertise and knowledge: the communities plan and implement conservation strategies that balance human settlements with nomadic needs. The project has re-established common property regimes, provided attractive incentives, and re-inforced pastoral organisations to ensure ownership. It has also stopped illegal hunting of wild fauna, and guides have been trained to guard the protected areas.

- **Lessons learnt from the Empowering Traditional Pastoralists Project in Morocco**

The project shows that well-organised and planned settlement based on environmental consideration is one of the most appropriate steps towards land resources conservation in arid lands. The project also proves that integrating of traditional knowledge into government environment policies and legislative framework can be useful (GEF/UNDP, 2002:4). The Moroccan experience established the fact that integrating traditional knowledge and government systems with regard to land conservation could provide wonderful results. The integrated management approach can also be made successful in similar conservation projects, if appropriately designed to bring all stakeholders on board in the initial stages of any conservation project.

5.13 Zimbabwe: Communal area management programme for indigenous resources (CAMPFIRE)

The CAMPFIRE programme is a Zimbabwean response to the requirements of community-based land management, which actually combines conservation and sustainable use of land. It is a national programme, which gives local communities control of the land in their area. Zimbabweans love their trees, animals and forests and they feel obliged to conserve them, both for their spiritual well-being and for that of future generations of Zimbabweans. Through the CAMPFIRE programme, the people were able to reawaken their spiritual and economic interests of living with wildlife. It is also wise to acknowledge that one of the significant resources with high income-generating potential in Zimbabwe, is wildlife.

However, the local communities view the keeping of elephants as unsustainable because the land does not have the carrying capacity to sustain the massive elephant population in Zimbabwe. This is also because elephants rip up tree trunks, destroy park vegetation, ravage farmland and terrorise villagers outside park boundaries. Above all, elephants account for more than 75% of the crop-raiding incidents attributed to large mammals in eastern and southern Africa (Summers, 1999). CAMPFIRE helped to pave way for the local communities to begin to exercise some control over the management of wildlife

resources. The programme also acknowledged the fact that community-based conservation can be implemented easily in small, homogeneous communities (Summers, 1999). Above all, the institutional structures developed for this purpose also helped to facilitate ownership and management of land, which eventually facilitated return of benefits to the producer communities. However, whether the local communities, whose land is destroyed by the wildlife, can continue to sustain the same wildlife to continuously destroy their land is debateable. It is important that special reserves be developed for the elephant population rather than to allow these elephant uncontrolled freedom to degrade lands. Through community-based approaches, wildlife and other land resources can be conserved with a minimum of land degradation.

- **Lessons learnt from Zimbabwe CAMPFIRE programme**

One of the lessons learnt is that the programme did not provide for grass-root decision-making and management of land, nor, as a result, did it actualise real participatory approach in its implementation (see Du Toit, 1999; Summers, 1999). Sibanda (1996) also notes that the programme failed to adhere to the participatory approach, and stressed that the intended villages (communities) were yet to be granted ‘appropriate authority’. Also, the programme was said to be district-based and not community-based. The elected authority’s refusal to pass on wildlife revenues to the communities was apparent and this refusal led to both hostility and increased intolerance to wildlife, and also a continued lack of communal environmental controls (Songorwa, 1999). However bold and progressive this programme has been, the current land invasion in Zimbabwe has made it impracticable. The communal interest and approaches to conservation of land resources have been superseded by the current situation where individuals are grabbing lands without heading environmental concerns. This act of land invasion has not only destroyed the CAMPFIRE programme, but it has overturned the country’s decades of land resources conservation measures. Above all, it is not possible to conserve land resources in a community where land invasion is encouraged. Thus, land invasion does not help in any professional way to ensure conservation of land resources.

5.14 South African: Land resources management and conservation experience

A series of studies have been carried out in the area of land resources conservation in South Africa. But for the purpose of this study, the management of protected areas in form of national parks will be restricted to general comments. For further, more detailed comment, the Richtersveld National Park with co-management experience will receive fuller attention. The Richtersveld National Park is selected for discussion because Richtersveld has some characteristic features corresponding to protected areas in Lesotho. Such features include the mountainous nature of Richtersveld, the level of peoples' dependence on land resources, and, above all, the under-developed infrastructural provision around the park environment itself.

- **Management of protected areas**

South Africa provides modest practices in the management of protected areas in the African region. Its modesty is comparable to that of the western world. To be specific, the country's attempts to strengthen stakeholders in the management of protected areas and to capacitate particularly the neighbouring local communities have been very positive. The increasing numbers of protected areas and conservation awareness measures have also set the pace for others to follow. However, the country's attempts to actualise community-based management have not been fully realised. This is so because in South Africa, the current National Park Policy environment does not provide an entirely fertile ground for community involvement. Community partnering has not been adequately conceptualised and the National Parks Act appears to have other more important priorities than actually working with the entire community (SANP, 2000). The National Parks Act of 1976 (with later amendments) provides that no one but an official of SANP may collect any non-aquatic plant, nor any part of a plant (including wood) nor collect, capture or kill any non-aquatic animal without being accompanied by SANP officials (SANP, 2000). Therefore, unsupervised collection would remain illegal in South African parks and this further means restricting neighbouring community members' access to such resources. This being so, some communities in South Africa view park development as a "two-headed phenomenon": development that offers them assistance and cooperation

while at the same time keeping them out of the park in fence and control units (SANP, 2000). Access to such resources and land claims around most protected areas are unresolved and nagging issues in the management of national parks. The perception of some affected communities is that SANP is delaying the land claims process. This kind of perception creates suspicion amongst community members, thus affecting their level of participation in park management.

Examples of cases where such problems are impacting on community/park relationships are: first, the Kgalagadi Trans-frontier Park, where both the Mier and the Khomani communities have made successful claims; second is the Kruger National Park, where the Makuleke community has regained the right to the land it was forcibly removed from in the 1960s; third, is the Augrabies Falls National Park, where issues of access and rights to land are still pending (SANP, 2000).

The manipulation of the local people by national park officers has been made possible because of stakeholders' difficulty to speak in one voice. This is made worse by the heterogeneous nature of some South African communities. The people have different views based on their geographical origin, background and their belonging to a different cultural grouping. These factors have never favoured attempts to actualise community involvement in land resources conservation (Cock & Fig, 2000). Some local communities do not know what they are entitled to expect, even if community's rights are entrenched in international conventions such as: Biodiversity Convention; the International Convention on Human Rights; the Indigenous Peoples' Convention, as well as the South African Constitution. Without this knowledge, local communities and communities adjacent to parks can hardly capitalise on the following preferential treatment, which they would have benefited from SANP authority:

- Preferred selection for employment in the park
- Preferred suppliers for goods and services in the parks
- A certain proportion of revenue generated in the park for investment in projects
- A certain proportion of resource generated in the park, e.g. game meat, thatching

grass or medicinal plants (SANP, 2000:259)

In summary, therefore, it is safe to say that co-management is entrenched in South African Park Management policy frameworks, but the willingness of the state to relinquish powers in actual practice still remains a problem. Equal partnership between local communities and national parks has been impossible because the relationship is at best, unequal, as the control of resource rests with National Parks officers. Currently the majority of South Africans are subjected to a double exclusion from national parks. These include exclusion from recreational and educational opportunities provided by parks and also exclusion from decision-making (Cock & Fig, 2000). Neighbouring communities are viewed as poachers, competition for land and water resource, and their poverty levels are regarded to be an embarrassment to tourism. There is a need for conservation initiatives that are both people-centred, and which concentrate on improving human conditions. Despite these views of (Cock & Fig, 2000 and SANP, 2001), it is important to note that uncontrolled access to national parks would amount to distortion of the conserved ecosystem. A conservation area needs some level of controlled access. This is to monitor harvesting and the use of the land resources therein.

- **Lessons learnt from the management of protected areas in South Africa**

The nature of the relationship between local communities and SANP needs to change fundamentally (Dladla, 1998; Mohamed, 2001). Officers involved in conservation programme development and implementation exercise considerable power over local communities. This management style is not a good practice to sustain protected areas. It is important at this point to emphasise that to maintain the variety, vitality, diversity and productivity of nature reserves in South Africa, conservation based on real community-based approaches must be adhered to.

- **Co-management of the Richtersveld National Park**

Notably, the people of the Richtersveld are among some of the poorest people in South Africa. Both infrastructure and service provision are under-developed in the park

environment, and an estimated 4000 inhabitants of the Richtersveld depend on the natural resources of the area for their livelihoods (SANP, 2000). The Richtersveld is a mountainous desert environment but biologically wealthy. The area has also been under pressure from increased grazing (Mohammed, 2001). Conservation potentials of the Richtersveld areas are being capitalised on by a variety of actors. Above all, it has been short-listed on South Africa's submission of World Heritage sites as the proposed 'Trans-frontier conservation Area' (SANP, 2000).

- **Management team of Richtersveld National Park**

The co-management arrangement that oversees the Richtersveld National Park involves the constitution of the *Bestuurplankomitee* (BPK) meaning the joint structure. The management of the Richtersveld National Park is characterised by exclusion of the local communities who regard their exclusion with negative sentiments, which consequently results in vehement opposition from the local inhabitants. The community representatives are elected into the committee on a biennial basis and the committee meets four times a year. There is also, an action committee that implements the decisions taken at the BPK meetings. Members of the action committee include community representatives and the park warden. One of the most challenging tasks is to address the lack of clarity about the roles and functions of the different partners. The Richtersveld communities are not dually represented in the BPK because four of the five community representatives are stock farmers who represent the interests of stock farmers rather than the interests of the entire Richtersveld community. The local community representatives' knowledge of conservation also remains questionable because they find it difficult to understand the economic terms used at meetings by SANP officials (Mohammed, 2001). This position has in practise, made SANP the lead partner of Richtersveld National Park management and conservation.

- **Management problems**

Issues relating to mining, grazing plan, compensation, logistical arrangements such as, for example the cost of attending meetings and a sitting allowance, as well as

unemployment, could not be resolved because of committee members' ignorance about how to deal with such matters. These are some of the implications of selecting persons who have no knowledge of conservation management; (see Boonzaaier, 1998; Mohammed, 2001; and SANP, 2000). The Richtersveld National Park has to date, not been able to capitalise on the opportunities offered by co-management. This is because the management has not displayed meaningful sharing of powers in the areas of responsibilities, authorities and decision-making powers. Thus, problems pertaining to capacity building, low legitimacy, authority, and particularly the as yet undefined responsibilities of the local representative, remain major issues (SANP, 2000). Many would agree that there has been no shift in power from state to local communities despite the much-talked-about decentralisation and empowerment of the grassroots in the management of the national park. However, it has been a bold and positive attempt to involve neighbouring communities in the management of the national park, even if such communities have been inactive members of the management committee. This researcher supports the attempt made and therefore argues that even if real community involvement has not been realised, it does not mean that actual community participation will not eventually be realised. The study further argues that the co-management attempt needs to be encouraged and that it be given a longer period so as to exhaust all means of making it work for the betterment of the local communities, as well as for the stakeholders. This is based on the assumption that the local communities may, given time, identify some enlightened persons who can effectively represent them in the management committees. This will enhance local communities' meaningful contributions to the management of national parks, while protecting the interests of the entire Richtersveld community.

- **Lessons learnt from co-management experience of the Richtersveld National Park**

Some of the lessons learnt include the lesson that co-management does not work unless concrete agreements are made and spelt out amongst stakeholders. Shared responsibilities among stakeholders need to be well demarcated and members also need to know this well. People chosen to represent the Richtersveld community in the management

committee are neither capable nor representative. Community participation should not be passive and selective. Even where such persons are elected, capable and knowledgeable persons need to be chosen by the people. Another lesson is that local communities need to be educated on the choice of persons SANP would want to work with. This can be done through facilitating local community meetings.

6. A GENERAL OVERVIEW OF LESSONS LEARNT

In general, it is to be noted that the land conservation programmes this study has investigated, span from crop, range, bare lands to protected areas, and, that from the empirical studies discussed in this chapter, governments appear to take the lead in most of the conservation programmes. The attempts made by various governments and international and national agencies to involve local communities in their different conservation activities is also significant. However, the level at which local communities are involved differs and there are some factors that determine the level of community participation in these conservation programmes. These factors centre round management approaches and incentive packages. Thus, local commitment has been greater in conservation programmes that employed real participatory approaches and that provided incentive packages which could lead to sustaining conservation programmes.

Based on the lessons learned, governments appeared to be more open to embrace local communities in cases involving the conservation of crop, range and bare lands rather than those involving conservation of reserves and national parks. Conservation practices of the latter kinds of resource have been managed without real community involvement. The resources therein are treated as being state owned and not local community owned. This means that local communities should not expect so much in terms of top management positions and substantial benefits, but should rather expect to watch their resources being siphoned off.

Having discussed the experiences of conservation programme management in the developing countries, it now becomes imperative to reflect on community participation in conservation activities and how such participation can be actualised. The next section, therefore, discusses the limitations of community participation and also means of ensuring its effective application in conservation programme management.

7. LIMITATIONS OF COMMUNITY PARTICIPATION IN COMMUNITY-BASED CONSERVATION PROGRAMMES

Based on the experiences of the conservation initiative discussed, this section goes on to discuss the limitations of community participation in community-based conservation programmes and also possible means of ensuring their actualisation. In examining this, it is important to note that conservation experts have expressed frustrations in connection with involving local communities in land resources conservation activities (GoL, 1997). Practitioners' points of frustration in the processes of ensuring community participation in conservation activities include the following:

- It is said to be an expensive process.
- It holds project investment hostage with unproductive activities.
- It reinforces local power struggles.
- It takes an enormous amount of time and also encourages endless delay in decision making processes

Barrow (1995) also argues that there are instances within a project life when community participation is inappropriate and becomes detrimental to the overall success of a project. He stresses that community participation means a horizontal flow of involvement where communication and power are inadequate. Besides, there is also another strong view, which maintains that community participation should not be confined to those local communities affected by land conservation projects. Rather, it should be designed to target some other important stakeholders such as schools, universities, private enterprises,

private voluntary organisations and co-operatives. The same school of thought emphasises that all stakeholders have valuable information that could be useful in the planning and implementation processes (Pelser & Kherehloa, 2000). Despite the above arguments Botes & Van Rensburg (2000) argue that community participation is not a guarantee that projects' intervention will not be without serious conflict or would make it successful. Besides, Vayda & Walters (1996), also view the devolution of control to local communities as a form of "green romanticism". Similarly, Anderson (1996) claims that the culture and traditions of some local communities help to sometimes disseminate inaccurate information and beliefs that affect the peoples' environmental behaviours. Conflicts may arise during the implementation phase, even after all stakeholders have agreed upon the project contents, the funding and who does what and at what particular stage. The above argument stems from the viewpoint that government authorities possess the necessary political legitimacy backed by professional expertise. In addition, it is assumed that there is no better forum through which decisions may be made other than through the government's bureaucratic channels. This assumption is definitely baseless and is therefore a false assumption. If government conventional approaches practically worked in practise, there would be no need to continue to search for alternative land conservation approaches.

In an attempt to disagree with the above, SADC (1996) noted that a top-down approach is politically easy to control and manage but that it breeds dependency on government. In contrast, some other sources agree that local communities are not empty vessels waiting to be filled; rather, they are energetically ready to apply the best available solution to land degradation. Hunter (1998) notes that actual participation requires the acknowledgement that local communities have the knowledge and ability to develop their environment. By this, Hunter's comment puts much knowledge and capacity in the hands of local communities. Indeed, it is further argued that none can effectively operate in isolation; local communities need government assistance, which should be given genuinely. Schreiber (1994:24) echoes the sentiment: *'This is true when it is noted that inputs from outside are necessary, but should be offered, rather than imposed, and should be made*

available not in the form of ‘packages’ but ‘menus’ for people and communities to select from, in accordance with their own needs and preferences”. Those who support joint management argue that unless both government and community initiatives are harmonised and accepted as equal conservation projects that emphasise community-centred processes, such attempts may continue to face problems such as:

- Insufficient attention to overall planning of such project.
- Lack of projects’ ownership by government organisations; and
- Insufficient government concerns.

From the foregoing, it is clear that a community-based conservation programme is not easy to actualise. In fact, institutional, socio-cultural, technical and logistical factors have been identified as major constraints and these constraints are both external and internal and in some cases, a combination of both.

The following section discusses some of the important criteria that could ensure successful practice of community participation in management and conservation programmes.

8. MEANS OF ENSURING EFFECTIVE COMMUNITY PARTICIPATION IN CONSERVATION PROGRAMMES

Having discussed the limitations to community participation in conservation programmes, it is now necessary to give some hints about possible means of ensuring community participation.

8.1 Real inclusiveness of all stakeholders

Inclusive approach specifically refers to special attempts to include not only the poor and the marginalised, but also other relevant communities in the planning, implementation and evaluation of land resources conservation efforts. Inclusiveness also means the involvement of as many relevant interest groups as possible in any land conservation

project. Inclusiveness is a good practice that needs to be adhered to in order to stop the government from acting as the main actor in conservation projects. Community-based management and conservation programme practitioners are of the view that beneficiaries are involved at all stages (Summers, 1999). This means that all segments of a community are involved rather than getting involved through elected committees or officers. Real inclusion also involves the participation of neighbouring communities, which may include educational institutions, churches, and the private and public sectors in conservation programmes (Pelser & Kherhloa, 2000). This practice is important because it ensures legitimacy and it also gives the communities the opportunity to own and to identify strongly with conservation projects. Inclusiveness also gives stakeholders the assurance that their interests are duly taken care of and well represented. Meanwhile, the process has to be perfectly democratic to allow genuine and real community participation. To realise the advantages of involving all stakeholders including local communities, it is important to organise training that will empower and equip local communities in all spheres of the conservation project. Such empowerment will enable them to make sound environmental judgments and to have the capacity to sustain conservation projects.

8.2 Inclusion of women

The value system that supports gender stereotypes may continue to pose serious threats to the practice of community-based land resources management and conservation programmes (Binne, 1995; Whiteside, 1998). Participation should not be controlled by gender. The earlier the women are given a free hand to take decisions pertaining to land, the better it would be for the practice of community-based conservation. Therefore, real inclusion of women (rural women land users) at all stages of conservation programmes is crucial for the successful implementation of community-based conservation. The community-based approach cannot be said to be in process without first ensuring equal male/female participation. The study agrees with the point of view that women should be given equal opportunity to participate in land resources management and conservation. The study also supports the empowerment of women as well as the principle of

guaranteeing them due and equal access to land as in the case of their male counterparts. To ensure that this is done well, it is important to dispense with the old tradition of male bias. It is also expedient to completely remove the marginalised policies against women regarding access, decision-making powers, benefit and so on, in order to make the practice of community-based conservation a success (Callicott, 1995).

In support of the reasons why women, like their male counterparts, need to be involved Dankelman, Davidson & Barrow (1993), FAO (1990) and Pelser & Kherehloa (2000) note:

- Women are often the main producers of food and make them users of land resources.
- Women often collect fuel wood, dung, and other forest resources for different purposes.
- Increasingly, men move out of farmlands to engage in migrant labour while the women are left behind to use the lands for farming.
- The percentage of women who are poor is greater than that of men, so, they are more likely to be compelled to degrade the environment to survive.

8.3 Decentralisation of powers

Decentralisation of powers is one of the most fundamental criteria for ensuring community-based management and conservation of land. The delegation of control over land to local communities involves relinquishing considerable authority and responsibilities on the part of the state (FAO, 1999; Summers, 1999). This study however, doubts the feasibility of totally relinquishing powers and responsibilities to local communities for reasons such as poor local capacity, inadequate funding, a lack of indigenous knowledge and insufficient technical expertise to tackle land degradation problems. However, mere fundamental shift, which requires central government to give powers to local government and communities, will be a good basis from which to launch community-based conservation practices.

To implement conservation programme, top-down approaches need to be reversed to bottom-up approaches. The practice of the latter approach will go down well with the idea of allocating and sharing responsibilities at the local communities. This means that local communities should not only have a say in the conservation project, but also part-take in the decision-making process, as well as have control over planning, implementation, monitoring and evaluation processes (Chikozho, 2001). This role is important for the continuity, maintenance and sustenance of conservation projects. This is so because experience has shown that conservation projects often end as soon as donors withdraw. If this approach is adhered to, both in principle and in practice, the sustenance of conservation projects is assured even when donors pull out abruptly. However, this study does not argue for absolute powers being given to the local communities without professional guardians and the facilitative roles of the government. Thus, conservation authorities have to adopt a new reality in conservation management: decentralising powers and sharing responsibilities between the local communities and governments.

8.4 Joint-management of a conservation project

The joint management initiative in conservation programmes has resulted from partnerships between local communities and other stakeholders. This initiative has arisen as a result of the limited state capacity to implement land resources conservation successfully, and the incapacity of local community-based institutions solely to accomplish land resources conservation sustainably (FAO, 1999 and SADC, 1996). For a joint-management conservation initiative to be effective, there is a need to clarify and understand the rights, roles and responsibilities that are due to partners. This involves contractual agreements amongst stakeholders. Agreements cover various partnership arrangements, including the degree of power sharing and the integration of the local and the centralised management system. Joint-management put under contractual agreement is feasible in an organised community that is ready to accept responsibilities. However, Isaac & Mohammed (2002:8) caution that the type of joint-management arrangement depends on the type of land to be conserved the community involved and the available human and material resources. A joint-management model should bring changes to the

power relationships between local communities and conservation authorities. According to FAO (1999) it is also expected to provide a framework to develop incentive for sustainable resource use and for a variety of actors. Joint-management facilitates power sharing, and one of the key benefits is expected to be the ability to move beyond the limitations of state, community or private management. Other expected benefits include: reduced operational costs, increased compliance with conservation regulations, as well as increased local community involvement in conservation activities. Beside the numerous advantages of joint-management, there are however some key issues that must be adhered to in order to ensure that management agreements be respected.

For both contractual and non-contractual joint-management of land to succeed, the following key issues must be adhered to:

- Partners must ensure that there is clarity about the conservation objectives and that management plans are drawn up and be in close consultation with local communities.
- Establish that partners have common objectives and such objectives must be held high and above every other objective.
- Ensure that capacity building and the training of local communities are assured.
- Ensure that technical expertise, such as lawyers for their advisory roles, are brought in the interest of local communities.
- Power sharing issues must be clarified between local communities and government, while local communities should have a powerful position in the partnership.
- Ensure that mutual trust is built between partners (Isaac *et al.*, 2000:21-23).

Other means of ensuring community participation include:

- The practice of indigenous knowledge towards land resources conservation should be upheld in the process of conservation.
- The integration of both indigenous and modern measures is important because complete use of scientific and mechanical measures affects local communities' confidence, zeal and enthusiasm to participate (MoA, 1998).

This researcher feels that the application of indigenous knowledge in local communities-initiated conservation projects could help to ensure community involvement. It must, however, be noted that indigenous measures and knowledge have limits. This must be considered while planning and designing conservation projects.

Conservation project success stories are few because of the ongoing unsustained incentives of cash and food-for-work to individual participants. Above all, absolute poverty should be eradicated among local communities if empowerment and capacity building processes must be successfully entrenched into the system. Inequitable distribution patterns of land between genders, races and socio-economic classes affect access to land resources, as well as conserving and managing them. Zimbabwe presents an extreme case of conflicts over land grabbing, displacement and land allocation in Africa. To allocate land resources equitably, communities and individuals must be provided with access and ownership rights to land resources, and an equitable share of benefits for managing them.

Incentives given to individual participants are not incentives given to communities (FAO, 1999). Provision of sustainable incentives is recommended. These can sustain land resources conservation activities, whereas “*Food for work*”⁴ or cash to individual participants does not actually help individuals to sustain their participation.

9. CONCLUSION

This chapter discussed characteristics of community participation in land resources conservation programmes in some Asian and African countries. From a number of case studies reviewed, it is apparent that international organisations’ sponsored and managed conservation projects were more responsive to community involvement. This however, is attributed to the offering of financial incentives to local communities. In some cases, this

⁴ The term food-for-work is used by the Ministry of Agriculture, Lesotho, to describe the commonly demanded incentive package by most local community members in Lesotho. The demand for, and offer of, food-incentive for any conservation work done by local community members is termed food-for-work. This study describes this type of incentive as unsustainable because conservation agencies most often have limited time set for conservation project implementation. This means that donors may not be available forever to continue to provide food for project sustenance.

is as a result of the initial consultations with local communities. The Asian experience expressed consistent interest in land conservation but lacked mechanisms for sustainability. Conservation attempts were beclouded by the exclusion of the poor, the tribes and the less privileged groups. In Africa, land resources conservation activities are prominent features of development activities, but such attempts are frustrated by governments' management domination.

Other factors that have hindered successful implementation of land resources conservation in most Africa countries include inappropriate land tenure systems, inadequate sharing of benefits, the exclusion of local communities from decision-making and the restriction of local communities' access and the denial of right to ownership.

Among the other factors are: a lack of sustainable incentives, the attitudes of local people and the government's grabbing of lands for development activities without concern for conservation.

In South Africa, the contractual joint-management approach has not brought about smooth management or an understanding between SANP and the nature reserve communities. SANP officers are consistently ignoring such contractual agreements to the detriment of the local communities, and at the expense of numerous nature reserves. Conflicts over grabbing, displacements, denial and benefits of land remain the dominant characteristic features of land resources conservation projects. This chapter shared the experiences of park management and joint-management practices, which appeared to take care of the inadequacies of both the government and the local communities in management and conservation of land. Yet, the impressive ways in which international organisations such as the UNDP, GEF and UNEP have tried to co-manage land with the local communities are truly worthy of replication. Some good practices exhibited in some of the conservation projects gave a clear indication that it is possible to mobilise local communities to take up their responsibilities and have confidence in their own knowledge, experiences and capability. However, this is not to say that the impressive co-management experienced between stakeholders can be achieved everywhere in Africa.

It may be more difficult to achieve in countries that have long inherited the attitude of food or cash payment for any conservation work done, believing that land resources conservation is solely the responsibility of government.

The lessons learnt from each case study received attention. The lessons were highlighted in order to avert repeating poor practices in the future. The chapter also discussed limitations to community participation and means of ensuring effective community participation in conservation programmes.

This chapter also classified community participation and tried to determine the level of participation permissible in the conventional practices and the level that is expected in the proposed community-based conservation programmes.

The following chapter devotes attention to a historical over-view of Lesotho conservation attempts, focusing on the conservation activities of the Ministry of Agriculture, Lesotho and the Environmental Management for Poverty Reduction, a UNDP project, in Lesotho.

CHAPTER FOUR

AN OVERVIEW OF LAND RESOURCES CONSERVATION ATTEMPTS IN LESOTHO

1. INTRODUCTION

Land resources conservation programmes in Lesotho cannot successfully be studied without an overview of attempts at conservation made by different conservation agencies. The purpose of this chapter is therefore to explain/analyse such attempts and how they are implemented. In doing this, the chapter presents some background geographical information relevant to Lesotho's environment, climate, and ecological distinction. Following these clarifications is an overview of some conservation attempts made by the Government of Lesotho to combat land degradation. Attention is focused specifically on conservation activities embarked upon by the Lesotho Ministry of Agriculture and the Environmental Management for Poverty Reduction Project of the United Nations. It is worthwhile to mention that a few general examples and statistics are given in the process to buttress the foregoing discussions.

1.1 Geographical location of Lesotho

The kingdom of Lesotho is a landlocked country completely surrounded by the Republic of South Africa: In the west and north the boundary is formed by the Free State province, in the east by the Kwazulu Natal, and in the south by the Eastern Cape province. Lesotho lies at the highest part of the Drakensberg escarpment of the eastern rim of the Southern African plateau, between 28° –31° South latitude and 27°-30° East longitude. The country is drained by three river basins: the Caledon River basin to the west, the Makhaleng River basin in the centre and the Senqu River basin in the east and south (Chakela, 1981; NES, 1999).

1.2 Climate and topography of Lesotho

The climate of Lesotho is classified as temperate and is characterised by warm, moist summers and cold, dry winters. The mean annual temperature is about 15⁰C in the lowlands with winter temperatures frequently dropping below zero at night. The rainfall in the form of high-intensity thunderstorms, or low-intensity frontal drizzles occurs between the months of October and April. The average annual rainfall varies from under 500mm in some sheltered valleys to about 1 400mm for some stations with orographic effects in the mountains (see GoL, 1998; Marake, 1999; and NES, 1999). The terrain is generally mountainous with a band of moderately slopping land along the western boundary. The elevation varies from 1 500 to 3 500 metres above sea level (Chakela, 1981; NES, 1999).

1.3 Population of Lesotho

Lesotho's population in 2001 is 1.8 million according to WPD, (2003). As mentioned earlier in Chapter One, the study area is Lesotho's lowlands ecological zone. The two chosen districts of Mafeteng and Maseru had a population of 224 312 and 411 235, respectively, in the year 2000. The projected population of these districts between 2000 and 2026 is 345 707 and 928 814 respectively. However, I doubt whether this projection has considered the effects of HIV/AIDS pandemic on Lesotho population.

1.4 Ecological zones of Lesotho

Lesotho is divided into four distinct physiographic regions based on elevation and climatic zones. The lowlands make up about 5 200 km² or 17% of the land area. The foothills have 3 588 km² or 15% and the Senqu River Valley, 2 753 km² or 9%, while the mountains have 18 047 km² or 59% of the total land surface of 30 344 km² (Marake, 1999; NES, 1999). (see Annexure 4).

Table 14: Ecological zones and land cover in Lesotho

Ecological Zones	Area in km²	(%)
Lowlands	5 200	17
Foothills	3 588	15
Senqu River valley	2 753	9
Mountains	18 047	59
Total	29 588	100

Source: NES (1999)

The elevations in the lowlands vary from 1 500 to 1 850m, the foothills from 1 850 to 2 000m and the mountains from 2 000 up to more than 3 400m above sea level (NES, 1999).

Of the total surface area, the land use cover available in Lesotho is as shown in Table 15 below.

Table 15: Land use cover in Lesotho,1998

Land Use Cover	(%) of total
Cropland	24.7
Range	64.8
Forest	0.4
Rock	3.4
Gullied	1.9
Villages	3.2
Roads	0.4
Water	1.1
Other	0.1
Total	100.0

Source: Chakela (1997:106)

The above land use cover explains the available land for use by the people. Focus of study is in the first three being cropland, range and forest.

The population census of 1996 puts all households, rural and urban, who do not own land to which they occasionally have access, at 25.4%. Landlessness has been on the increase from an estimated 12.7% of rural households in 1970 to over 16% in 1986 (GoL, 1998/99: 42). The implication of the shrinking arable land in Lesotho is that the newly formed households (new couples) hardly receive any of the three fields on which every adult is customarily entitled to grow food crops such as maize, sorghum and wheat, and also, a plot on which to build a house. In fact, this has further implications for the levels of interest people have in land conservation.

1.5 Land Degradation in Lesotho

The much that had been written about the extent of land degradation in Lesotho have been without researched statistical records. The only available record about the extent of land degradation in Lesotho is shown in the following table.

Table 16: Land cover change in Lesotho between 1989 and 1994

Land-cover classes mapped in Lesotho	Total areas for 1989 (in hectares)	Total areas for 1994 (in hectares)	Change in hectares
Shrub land and Low Fynbos	897 200.0978	773 773.3500	-123 426.7478
Unimproved Grassland	46 146.3912	23 437.2996	-22 709.0916
Forest Plantations	1 786.5474	1 998.8020	+212.2546
Wetlands	1 776 5801	845 6758	-930 9043
Degraded: Unimproved Grasslands	537 797 7939	683 741 7594	+145 94 9655
Cultivated: Temporary – Semi Commercial / Subsistence Dry Land	1455 807 8639	1 353 680 7252	-102 127 1387
Urban / Built-up Land: Residential	6 526 0540	18 088 0775	+11 562 0235

Source: MoA (1999:8-12)

Table 16 depicts the land cover change in Lesotho. The + and - signs in the ‘change in hectare column’ authenticate the extent of change within the period of study. Shrub,

unimproved grassland and temporary cultivated lands have - signs while forest plantations, wetlands, degraded unimproved grasslands and urban/built-up lands have + signs.

Lesotho has an extremely fragile ecology which is exposed to severe land degradation. The increase in land degradation could also be attributed to the expensive nature of conservation and rehabilitation processes which Lesotho government has not been able to shoulder effectively. Of course, Lesotho almost totally depends on the South African economy (mine workers and sales from Lesotho Highlands Water Project).

2. HISTORY OF LAND RESOURCES CONSERVATION ACTIVITIES IN LESOTHO

This section focuses on three historical phases of institutions in Lesotho regarding efforts in land resources conservation programmes. The purpose of this aspect is to portray a true picture of the Lesotho Government's attempts, by the colonial powers and after independence, to address the land degradation problems in the country. The section also devotes attention to acknowledging the levels of local communities' involvement in some selected land resources conservation programmes.

2.1 Pre-Pin period in Lesotho

The historical perspective of land resources conservation in Lesotho has phases of pre-Pin and post-colonial periods¹. W. A. Pin was appointed in 1935 to chair a commission on the financial conditions of Lesotho as part of colonial government intervention. This study focuses more on the postcolonial period (after 1966) when the people had gained independence and were expected to have taken full control of their aspirations, needs and priorities. Thus, only brief mention is made of the pre-Pin conservation activities in Lesotho.

¹ The period from about 1860 to 1930 is normally referred to as the Pre-Pin period. The period from 1935 to independence (1966) is referred to as W. A Pin period while post independence is referred to as after independence. (post 1966).

The history of land resources conservation in Lesotho is a long and active one. The period from about 1860 to early 1930 is normally referred to as the pre-Pin period, which is an era of agricultural development in Lesotho. During this period, large tracts of land were available for agriculture and for the local population. The people were extensively involved in farming and had understanding of erosion. They carried out frequent inspection and maintenance of the diversion furrows used to divert storm water from cropland. Other practices, such as mixed cropping of grain crops, legumes and vegetables providing a better cover for the soil and better retention of the soil structure, were adopted for the purpose of soil conservation (NFAP, 1996). Then, lands were allowed to go fallow because arable lands were available.

During this period (1860-1930) ploughing was introduced which allowed for the cultivation of larger plots. The improved technology of ploughing was designed to meet the growing demands of the growing population. With it, came the introduction of monocultural crops such as maize and wheat. It also brought a situation where almost all of the arable land in Lesotho was cultivated, both for domestic consumption and to meet the market demand in neighbouring dominion states (MoA, 1988; 1998 & 2000). The MoA (2000) revealed that the major participants in conservation during this period were the farming people, though with very few government directives on tree planting.

The context of farming in Lesotho changed completely with the changes in market opportunities. Competition from abroad and duties imposed on Lesotho's agricultural foods exported to South Africa were setbacks to the farmers (MoA, 1988). This unfortunately did not have the desired effect because of the influx of Basotho into South Africa at the end of the war between the Basotho and the Boers (in the early 1900s). Again, the restrictive immigration laws in South Africa meant that there was no reciprocal migration into South Africa. Thus, the benefits from the land continued to decline thereby changing the attitude of the Lesotho citizens towards their land. By the end of this period, Lesotho was no longer an exporter of agricultural products (MoA, 1988 & 1999).

- **The 1930s and conservation**

Lesotho had a climatic crisis in the form of severe drought followed by heavy rains, which in the 1930s, dramatically changed the land use landscape of Lesotho. The cumulative effect of these crises drew the attention of the colonial government to the agricultural and economic situation in Lesotho. With this, conservation became their major colonial pre-occupation (Carl, 1982). The Pin commission recommended the construction of mechanical structures as erosion control measures and the reclaiming of badly eroded areas (MoA, 1988; 2000). It was, however, observed that, despite enlisting the help of local chiefs to mobilise local participation, there was low farmer participation in land resources conservation activities (MoA, 1999). It was apparent that the only way to sustain people's participation was through food aid, labour and cash remuneration. Thus, at the close of the colonial era, enthusiasm for the erection of mechanical barriers along gullies was beginning to wane, but, more regrettably, the interest of farmers in conservation was lost (Carl 1988). In the period 1958-1966, emphasis was laid on public education about land resources conservation. This was due to the poor local participation in conservation activities and the view that policy which combined social and technological procedure would be more effective.

On the whole, very little success was recorded during this period. However, much was achieved in terms of community participation. The core of the matter was the dictatorial rule that tried to impose western ideas on a traditional background. It is needless to say that the efforts of the period were fruitless, even if the period was full of conservation support mechanisms. The severe drought of 1930 rendered what had been done wasteful. In fact, even if conservation was the pre-occupation of colonial rule, the mechanical approaches never went down well with the people. It is not surprising therefore, that the colonial conservation attempt was not sustained. (see Chapter 3 for similar impact of top down approaches).

The major messages are that the pre-Pin period employed sustainable agricultural development practices and sound conservation principles. The period between 1935-1966 experienced mechanical approaches initiated by the British. The conservation attempts made were unsuccessful in involving community participation while the post independent period experienced wider coverage of conservation initiatives.

The above has discussed phases of the pre-colonial attempt to conserve land resources in Lesotho. The next section devotes attention to the attempt made before and after independence by the Ministry of Agriculture, Lesotho.

3. CONSERVATION ATTEMPTS IMPLEMENTED BY THE MINISTRY OF AGRICULTURE, LESOTHO

Before and after independence in 1966, efforts were made to involve Lesotho communities in land resources conservation activities through the formation of different Village Tree committees. These efforts were, however, frustrated by political meddling by the then ruling Basotho National Party (BNP) in that the party restricted membership of these committees to 'party card carrying members' (MoA, 1988). Apart from this, conservation efforts were also affected by reasons such as the inability of the people to learn from past mistakes, lack of cooperation between various bodies working on land resources conservation projects, regulations concerning conservation, and biological *versus* mechanical conservation treatments. Despite these, Lesotho has continued to receive technical and financial international conservation aid to date (UNEP *et al.*, 1998).

At this point, we need to take note of some bold conservation attempts made just before independence and immediately after. These attempts include: Taung Reclamation Scheme Tebe-tebeng project, Thaba-Phat'soa Area Improvement Project, Woodlot Programme, Senqu River Agricultural Extension Project, and Leribe Pilot Project. Others are Thaba-Bosiu Rural Development Project, Khomo-Khoana Project, Land and Water Resource Development Project, intensive arable land projects, and production

through conservation programme and park development. An attempt will now be made to examine the extent to which these efforts tried to involve local community members, and the application and acceptance of indigenous knowledge alongside modern and scientific measures.

3.1 Taung Reclamation Scheme (1956-1961)

From the available records this project, though brought to an abrupt end by the then colonial department of Agriculture, was designed to reclaim severely eroded land through stringent control of livestock. Local authorities were not properly involved and the imposed cattle regulations were unrealistic and unreasonable. According to the regulations, "fifty head of cattle should be left in the lowlands while the remaining should go to the cattle post while well over 10,000 animals remained in the lowlands" (Chakela *et al.*, 1983:25).

This regulation severely antagonised the people's attitudes towards the project, its staff, and the entire approach. The resentment was attributed to the controlled number of animals. The attempts by government to compel people to participate only at the level of implementation and in the midst of resentment imposed severe limitations. A project of this nature ought to have involved the community members right from the decision-making stage, instead of at the stage of implementation. The project came to an end because of the poor response from the local people.

3.2 Tebe-Tebeng Project (1956-1960)

Based on reports of the MoA (1988), this is the first attempt at an integrated rural development project at the local level in Lesotho. Its objectives were to improve farming practices, create dams, and construct conservation structures and other development activities. On the whole, much emphasis was laid on working with local authorities (chiefs & headmen) and village development establishing committees. However, the project approach of working through the chiefs and headmen instead of having direct contact with the people, made the Lesotho citizens grow suspicious of the project,

thereby causing considerable tension between European staff and the rural / local participants. In fact, it got to a point, where it was impossible to secure the cooperation of the people through the chiefs and the headmen. Thus, the project failed to achieve its integrated approach objectives. This was as a result of not working with the members of the entire community. Instead the project preferred the use of agents (chiefs and headmen) who could not will-the people to participate (MoA, 1998). Thus, poor level of community participation was also experienced in the project.

3.3 Thaba-Phatšoa Improvement Area Project, (1957-1970)

The project was designed primarily to increase crop production, promote fisheries and establish tree nursery with a conservation component. Part of the project's component, such as the irrigation scheme, was not started until 1964. The project was suspended for some time but re-activated after Lesotho's independence in 1966 (MoA, 1988). The management of the project also failed because the management was beclouded with confusion because people were not ready to get involved. The people rather exhibited reluctant attitudes towards the project. Limitations and gaps of this kind between local people and project staff - created by project planners - frustrate conservation attempts. The state of confusion between the project manager and the beneficiaries would have been avoided had only the people been involved from the outset. This culture of only trying to bring in the people at the project implementation stage has perpetuated itself in almost all conservation projects. To date, it remains an up-hill task to implement any project that has been unilaterally planned. Moreover, this was a project inherited from the colonial government. The suspicion still lingered in every mind about the colonial government and its autocratic management, so much so that the project failed to win the interest of the local community.

3.4 Woodlot Programme (1972-1987)

The Woodlot Programme project was designed to create forest service, which was to provide the people with fuel wood, poles, and so on, and at the same time enhance land resources conservation. The programme succeeded only marginally. The effort of the

forest division to ensure that local involvement was higher than it had been in the preceding projects was acknowledged. The inter-village hostility and squabbles and those with the project manager made the local people destroy the woodlots. The 20% of the gross profit that was to be paid to the villagers from the sale of the wood products did not materialise. This promise turned out to be a pipe dream (MoA, 1988; 1999; 2000). This was because no concretised decisions were reached before the project was started. The 20% gross profit was only promised to attract people's participation in the project. The high level of people participation achieved was not sustained, both because of distrust and Government's conventional approaches to conservation.

3.5 Senqu River Agricultural Extension Project (1972-1988)

This project was to meet the Government of Lesotho's target of self-sufficiency in food. Major activities of the project were in the area of land resources conservation. Broad - based terraces and diversions were constructed, but these were severely damaged due to a combination of poor design, inadequate ploughing and heavy rainfall. Also, the local people were forced by the traditional and local institutions to participate in the schemes, which they felt were unprofitable to them. The project, which covered the southern lowlands, was partly designed to increase national agricultural production, but did not take into consideration existing knowledge or factors, which actually limited production in the area. According to the MoA's reports, (1988, 1998 and 1999), among the limiting factors were: failed communication with farmers, lack of maintenance of structures and lack of knowledge of participating farmers. These limiting factors betrayed community involvement in the project. In order to bridge the existing gap, Government needs to open up well to the local people. The interaction between government officers and local people should also be continuous. Continuous interaction is one of the surest ways of building confidence and trust, thereby establishing partnership between local communities and government agencies.

3.6 Leribe Pilot Project, (1973-1977)

The Leribe Pilot Project was designed to promote land resource conservation by building conservation structures along gullies. The focus was on increasing and intensifying crop production. The project also encouraged appropriate land use capability research. The project became elitist in the sense that it did not involve local authorities, farmers and local institutions (MoA, 1988; 1999). Thus, the local people for whom the projects were to be of benefit could not carry out the maintenance of the conservation structures already built. Since the objective of this research was to impact on community involvement in conservation, it was hoped that it would provide solutions for resolving all similar management crises that have ever arisen from government approaches to management and conservation of land resources. This means that opportunities, avenues and means of integrating local communities and their ideas into land resources conservation must be provided as a sure way to relinquish total powers, rights and responsibilities to community members.

3.7 Thaba-Bosiu Rural Development Project (1973-1977)

The project had some components of land resources conservation, like erosion control and transformation of land use patterns. The most striking aspect of the project was the overall expenditure on conservation efforts, especially as it relates to increase of land in fallow. The project was, however, capital intensive and the construction of terraces and waterways took a significant amount of land spaces out of production (MoA, 1988; 1999). No significant mention was made of the level of community participation in the project. However, remarkable efforts were made even if crop yields did not increase as expected (MoA, 1999). In any case, it is wise to say that the intensity of capital investment could have provided enough for capacity building, which could at the same time have helped to sustain the project. In every project, this has been a lesson which is never taken into account by planners in the planning of future conservation programmes.

3.8 Khomo-Khoana Project (1975-1982)

According to the MoA (1988; 1999 and 2000), this is one of the projects in Lesotho that

has actually grown out of a pilot project. The project did a good job in building strong and dependable conservation structures and included much extension work in its activities. Soil and water conservation efforts were linked with those of increased production of both crops and livestock. However, the costs of conservation works could not be justified because the cost was not established but critics alarmed people about the high cost of the project. The project also suffered from lack of government support and poor inter-ministerial coordination. The extension or conservation assistant in charge of the project was stationed at Leribe, which was too far away from the project location (MoA, 1988; 1999). This raised concern amongst the beneficiaries. This notwithstanding, the project was ranked as being moderately successful. The lack of inter-ministerial coordination was born out of poor planning procedures. The absence of the stakeholders' involvement also created a wide gap between government officers and other stakeholders. The involvement of all stakeholders in the planning process could have meant the involvement of local communities and Government agencies that had a stake in the project. This and other limitations of the past and present projects form the basis of this further investigation and this needs to be addressed to ensure sustainability in community-based conservation programmes.

3.9 Land and Water Resource Development Project (1975-1983)

The project was intended to transfer skills and technology, provide institutional development and encourage linkages between the Government of Lesotho and rural communities. It was also to support Lesotho's food self-sufficiency goal and to further develop technical manpower to address Lesotho's erosion problems (MoA, 1988; 1999). On the whole, many conservation structures were built but lacked sustainability plans. The project made some reasonable impact on training national personnel and also achieved much in the construction of terraces. Yet, the project continued without addressing community involvement issues, possibly because this was not the priority of the project designers. The relationship between stakeholders in this project is one of the focuses of this current feasibility study. Community involvement is a must if sustainability must be achieved in any land resources conservation schemes. Generating

funds to build conservation structures provides only temporary measures if local communities are not capacitated to sustain and maintain such structures. The appropriate foundation for any conservation must start from considering the priority projects of the community and building these up for the sustenance of such projects.

3.10 Intensive Arable Lands Project (1979-1982)

The Intensive Arable Lands Project was designed to erect conservation structures in the catchment areas. This was also done without involving the communities. Conservation regulations and implementation procedures were not given due consideration. According to the MoA (1988, 1999 and 2000), much lip service was paid to community participation during the planning and implementation of the Intensive Arable Lands project. The project initiated the Conservation Area Plan (CAP), which today is one of the centrepieces of the conservation division's work. The results in various areas are reflected in terms of hectares in Table 17.

Table 17: Results of Intensive Arable Land Project, 1982

Conservation activities	Hectares
Contour farming	152605
Contour strip cropping	16417
Cover crop	11669
Crop residue management	485383
Diversion	164676
Donga stabilisation	11669
Grade stabilisation structures	13336
Grass strips	202764
Grass water way	50717
Pond	3334
Range management	1204506
Road	1667
Crop rotation	100221
Terrace	106182

Source: MoA (1988:24)

The project has the above results to its credit but due to lack of information about the project's encatchment land area, the impact of the project could not be measured. The conservation structures erected by way of donga stabilisation are 11669 whereas grade stabilisation structures are put at 13336. The conservation structures can be compared

with the EMPR Project which constructed 578210 stone check dams within a period of 6 years (1996-2001). (see section 6.3, and Table 22 in this Chapter). The sharp difference in the number of structures built along dongas can be attributed to the fact that the EMPR Project concentrated more on donga rehabilitation, while the Intensive Arable Land Project focused on range management and other arable land improvement measures such as contour farming, crop rotation, terraces, grass strips and so on. The questions that remain unanswered are: Are the above structures sustained? How are we sure that these were the priority of the people? Was any sustainable incentive provided for the people to carry on? These questions ought to have been addressed before the commencement of another project. The doubtful situations were created by conventional approaches which did not consider the views, feelings and the impact the local people could make in any conservation programme.

3.11 The Production Through Conservation Programme (PTC) (1981- 1996)

In 1981, the Swedish Government agreed to assist the government of Lesotho to combat the acceleration of land degradation. The goal of the PTC was to support land users in increasing production through the conservation of natural resource, as communities, individuals and land users have the primary responsibility for production and conservation. The project developed into land use planning and forestry between 1981-1984, and in 1985, the Farm Improvement with Soil Conservation (FISC) Project was initiated. In 1989, the three projects merged into the Production Through Conservation (PTC) Programme. In 1992, the projects were finally merged under the PTC II Programme (NFAP, 1996). This merger was brought about because farmers never held conservation as a high priority. The integration brought about all kinds of production through better land husbandry. This programme was firmly based on a village development planning procedure, where all villagers and not only their representatives could participate.

According to the PTC historical document, the programme brought about comprehensive change of values and attitudes towards rural development, conservation, forestry and land

use planning. Despite the acclaimed successes of the programme, the same project document revealed that the programme lacked a unified extension approach and poor follow-up. Other constraints reported were: low morale and motivation; a lack of transparency and accountability; confusion and chaos; competition among projects; and, half-baked decentralisation policy (Borotho, 1998). These emanated from a lack of planning, coordination and cooperation amongst stakeholders. Beside the PTC attempt, there are other bold initiatives to conserve Lesotho land resources.

3.12 Park development and management in Lesotho (1970-2003)

Park development in Lesotho started in 1970 when Sehlaba Thebe National Park, with 6475 hectares, was developed. Thereafter, the Lesotho Highlands Development Authority (LHDA) developed three other parks, namely Masitise Nature Reserve, Bokong Nature Reserve (BNR) and Ts'ehlanyane National Park. Three new protected areas and seven community nature reserves are being nurtured by the Conserving Mountain Biodiversity Project in Lesotho. while at the same time promoting alternative livelihoods and small-scale enterprises in local communities that have given out their land to conservation activities (GEF/UNDEP, 2002:7). With these added, the area under conservation doubled. On the whole, the protected area remains less than 0.5% of Lesotho total land surface, which is about 30350km² (LHDA, 1998:XII). Uganda has 10 national parks, 10 wildlife reserves, and 710 forest reserves, covering 33,000km², which is 14% of the country's surface area (Howard *et al.*, 2000:858). These few examples point to the fact that Lesotho needs to redouble her efforts in park and reserve development which should, however, not be to the detriment of the people.

In Lesotho, local communities have not been given real stakeholders status in the management of parkland reserves, particularly Sehlaba-Thebe National Park which was developed in 1970. As a result of communal land ownership in Lesotho, Government acquires land for development without much regard for the original occupant. Sehlaba-Thebe National Park sites were grazing lands for the Sehlaba-Thebe community. As evidence, their cattle posts used before 1970 when the land was converted to a National

Park still remain (LHDA, 1998). This evidence supports their long and persistent agitation for alternative grazing land. The Lesotho Highlands Development Authority has tried to improve the protected areas which the authority manages by collaborating with the local communities. However, the expected joint-management atmosphere is still lacking, as Government sees no need to accord such communities real stakeholdership status in the management of these parks. A certain degree of recognition, reasonable compensation, sustainable incentive packages and alternative land ought to be provided for neighbouring communities, otherwise a high rate of government and community conflict will continue to be propagated in any conservation attempts in Lesotho.

3.13 Overview of Government's conservation attempts

The first phase of Lesotho conservation projects went through the Ministry of Agriculture, which still fulfils land conservation implementation roles through its conservation division. The several conservation projects that were sponsored by Government from 1956 to the early 80s recorded only a few successes. This is as a result of the apparent exhibitionism of conventional approaches inherited from colonial rule. The very few that succeeded, fizzled out as soon as sponsors withdrew their funding. Apparently, conflicts and suspicion about the intentions of such projects and sometimes between community members, the chiefs and village heads were common features of the conservation programmes. The people were never consulted to seek their views, either about the project in question or about their priority projects. There was no significant attempt to relinquish decision-making power except partially in respect of implementation responsibilities. The desire to be consulted for every conservation work done is high amongst local community members. This relentless need for cash payment exposes both their ignorance about the longterm benefits of conservation and their desperate immediate needs for survival. It may be a hasty suggestion to say that this aspect of people's demands would require yet another broad study.

Another crucial feature is the displacement of traditional approaches to conservation by approaches which are modern and mechanical. The people's unwillingness to participate

was partly to resist approaches with which they were not familiar or conservation measures which took away part of their land space (see Abrol & Sehgal, 1994). Individual and group approaches were promoted by several of the projects. There is an argument that individual and group approaches are fundamental steps towards capturing community participation. Even if this were true, it is undefendable for such steps to be taken in practice for three decades without any reasonable attempt being made to embrace a communal approach. It has been established beyond reasonable doubt that both individuals and chiefs wanted different approaches for their own selfish ends.

Thus, community-based approaches were never seriously considered by any group. Power sharing, ownership rights, benefit sharing and adequate land tenure system all attempts combined to hinder the practice of the communal pattern of land resources conservation in Lesotho.

4. AFFORESTATION DEVELOPMENT EFFORTS IN LESOTHO AS CONSERVATION MEASURES

Trees have generally played important roles in the Sesotho culture, although this is hard to believe, given the bare and open landscape that characterises the country today. There is evidence in missionary reports and Sesotho oral literature to the effect that Lesotho had, in fact, enjoyed considerable tree cover which served as habitat for wild animals like lions, leopards and wolves (MoA, 1988; NFAP, 1996). This position is supported by the features of few inaccessible areas of the lowlands with closed evergreen forest. This situation deteriorated remarkably in the past two centuries due to both human and natural factors. The occupation of the present eastern Free State Province by the Boers and the consequent displacement of the indigenous Basotho population led to the migration of the Basotho population to the mountain areas. This put strain on the forest resources of the area (MoA, 1988; 2000). The situation worsens when natural regeneration is prevented by uncontrolled grazing within the communally owned rangelands (NFAP, 1996). It was also recorded that the Rinderpest Epidemic of 1897 devastated the bovine population to

such an extent that there was a scarcity of cow dung, which had traditionally been a major source of fuel. This is in addition to the uncharacteristically cold winter of 1902, which brought about an unrestrained exploitation of the tree resources in Lesotho (MoA, 1988, 1999; 2000). Whatever little vegetation was spared by this ruthless scavenging for fuel was lost to the over-grazing that accompanied the attempt to rebuild the bovine herd. The result of this was a general scarcity of wood resource required to meet the daily fuel and other social needs of Basotho. The near extinction of indigenous flora and fauna resulting in increased water run-off, which caused severe gully erosion and a decrease in soil fertility also added to make the situation what it is today. The following are some of the afforestation attempts made in Lesotho to return the country to its natural vegetation.

4.1 Afforestation responses in Lesotho

Forest development has been actively promoted in Lesotho for almost 150 years (NFAP, 1996). Ever since the above-mentioned series of disasters, there have been concerted attempts to restore the Lesotho landscape to its original glory through forest regeneration. But even before these ecological disasters, the missionaries who introduced the first exotic species of trees into the country laid the foundation for tree planting. This was done through a seed distribution programme in 1855. In 1912, the free distribution of seeds and seedlings and the awarding of prizes for tree cultivation gave further impetus to this foundation. This gave a boost to tree planting, especially as a means of combating gully erosion. It must however be said that these early efforts were geared more towards conservation than to afforestation (MoA, 2000; NFAP, 1996). Deliberate attempts at forest development did not start until 1930 when thousands of trees were planted but unfortunately destroyed in the drought of 1932-33. The venture was executed by the Protectorate administration with the use of paid labour, and it had to be repeated in 1935, this time with limited success. The establishment of the Department of Agriculture in 1936 and its concern for the deteriorating landscape gave rise to a major land conservation programme in 1936/37, which included a forestry component (MoA, 1988).

Although there is no record of the appraisal programme, it is assumed that it was not very

successful; otherwise, there would have been no need for subsequent afforestation schemes. One such scheme was the Village Tree Planting Scheme of 1942, which tried to encourage afforestation through popular participation and individual ownership of tree resources. Yet, the project was abandoned due to conflict of interests between the chiefs and the villagers. The chiefs, who controlled the rights to land under the Laws of Lerotholi, rejected the notion of individual ownership of tree resources in favour of communal ownership (MoA, 1999). This action of the chiefs dampened the “*Matsema*” (self-help). Record has it that 6.7 million trees were planted in the first year and 8.2 million in the second year (MoA, 1999; 2000). However, inadequacies of the approach were apparent as the survival rate was low and the approach was abandoned in 1947 (NFAP, 1996:16). The enthusiasm of those individuals who would rather plant trees for themselves resulted in the very low protection of cultivated trees and an abysmal survival rate of the planted trees (NFAP, 1996; SADC, 1996; Sechaba Consultants, 1989).

This failure to achieve community participation in the tree-planting scheme probably formed the basis for choosing the woodlot approach, which involved the establishment of government-owned woodlots on plots donated by local authorities on behalf of the community. The Lesotho Woodlot Project (LWP) started in 1972, and under the scheme woodlots were established and managed by Government on plots donated by local authorities. Such plots were offered by the communities with the understanding that Government would employ community members involved in forestry activities in the form of “*food for work*” projects. It was also a source of concern to the communities because of the failure of the first opportunity to buy the resources from such forests and the 20% share of the profits accruing from the sale of such forest resources (MoA, 1999).

Since the LWP, other afforestation / conservation schemes have been tailored along the lines of Community Social Forestry (CSF). Such schemes in Lesotho include: the Matelile Rural Development Project, the Forestry Component Project, the Maphutseng Farm Improvement with Soil Conservation Project, the Thabana-Morena Development Project, the IFAD Project and the Food Security Assistance Programme. Other schemes

include amongst others, the Plenty Lesotho Project, the Integrated Community Forestry and Agricultural Resource Management Project, the Lesotho Red Cross Schools Tree Planting Project, the Seforong Women's Rural Integrated Project on Arid Lands and the Community Forestry Project of the Lesotho Highlands Development Authority (SADC, 1996:16-18). Some of these projects encouraged communal and individual participation. The planning attempt also dispelled fears concerning people's participation in forestry programmes, and, thus laid the foundation for the adoption of social forestry as a legitimate approach to land resources conservation. Again, the appraisal of the woodlot approach revealed certain shortcomings that helped to change people's views concerning the participation of local farmers in forestry programmes. These were the actions of the chiefs and the unkept promises as regards benefit-sharing which had negative impacts on people's participation in future afforestation schemes. Suffice it to say, however, that the decision of the chiefs to have communal forestry programme's supports the principles of the community-centred approach.

4.2 The practise of social forestry programme (SFP) in Lesotho as a conservation measure

Although the need for the involvement of people had been realised much earlier, the LWP approach to afforestation was not replaced by the social forestry approach as an operational policy until as late as 1990/91. This approach has been more effective because social forestry involves local people in tree planting and management. MoA, (1999) argues that, given proper encouragement, local people may ensure an increase in forest areas, which will eventually benefit local people rather than outsiders. The approach, which served to complement other forestry development activities of the Forestry Division of the Ministry of Agriculture, was conceived as an answer to the alienation of the people in respect of woodlots. Several reports had indicated that people were negatively disposed to woodlots, (MoA, 1988, 1999; 2000) which were usually identified with the government and sometimes with the political party in power. It was believed that in the social forestry approach, ownership of the product was by individual farmers rather than by the government and the community. It drew upon vital lessons of

past experiences in the sense that it acted upon the persistent desire of people to own forest products on an individual or group basis, while at the same time avoiding the fate of the Village Tree Planting Campaign of 1942 by standardising ownership procedures. This individualistic approach, though successful in mobilising local people, has constraints in terms of individual ability to provide lands for forest development. The communal approach on which this study is focused would on the other hand remove land scarcity faced by individuals. However, the former approach was expected to further strengthen the role of the Forestry Division within the Department of Conservation, Forestry and Land-use Planning of the Ministry of Agriculture, with amongst others, the following objectives:

- To rehabilitate degraded land
- To make sound land-use plans and land resources management practices
- To provide household security in fuel production
- To protect the environment.

The above objectives are in line with the goals of social forestry, which have to help sustain supplies of fuel wood to local people. The advantages of the social forestry approach are that it is directed at the people, who identify their forest resource needs and then prioritise independently of the government and with the full assurance of the ownership of the land resource. The security of ownership encourages individual and group responsibility towards the trees as well as the material benefits that accrue from the resources. It also reduces the involvement of the government in the establishment and management of the woodlots. The implementation of social forestry is, however, not without constraint. The section that follows will deal with such constraints.

4.3 Constraints of the Lesotho Social Forestry Programme

Social Forestry in Lesotho met with several constraints which are technical, legal and social by nature. Under technical constraints, one of the problems has been that of getting foresters to move away from focusing on state plantations / forest reserves. A concomitant concern was the number of hectares planted being based on the social

forestry approach which emphasises the number of trees planted. It is evident from this that there is a need to reorientate foresters on how to deal with the new approach. Also, social forestry, by its very nature, requires a lot of extension work, which did not materialise.

Generally, when dealing with people living below the poverty line, it is sometimes difficult to get them to appreciate the problems of the environment and then to work towards solving them. This is so because the very poor are concerned with a more fundamental struggle concerning immediate survival, and not with conservation which will not yield dividends for a very long time. As has also been recorded in various studies, fuel wood scarcities by themselves rarely provide a sufficient incentive for people to plant trees. As Barrow (1993) observes, this is because farmers are much more interested in trees as a source of structural timber, fuel wood, poles, fruits and other products, especially when these can be sold for cash. This is especially so, where the primary consumers of fuel wood are not involved in decision-making concerning afforestation. Women and children's groups would therefore be ideal routes for achieving grassroots action as they are actually in touch with the local environment and stand to be the first to gain from the availability of fuel wood and forest products. They are the ones who generally have to spend hours walking considerable distances in search of fuel wood (Barrow, 1993).

There is also the legal problem of land acquisition. Apart from the gullies and other non-productive land, it is sometimes difficult to acquire land for afforestation. Sometimes the Ministry of Agriculture intervenes to help local farmers in their bid to acquire land and subsequently help them with advice on the acquisition of the necessary application form (Form C). Yet, the control of such lands rests with people outside the Ministry of Agriculture. In fact, in Lesotho, there is lack of clarity as to the ownership of trees and shrublands outside demarcated woodlots and reserves. Land allocation is caught between three arms of government concerning tenure jurisdiction. These are between the chiefs, central government and the new local government councils. In principle, land falls to the

king and his chiefs, to whom the 1993 Constitution gave, through parliament, the right to determine the mechanisms of such allocation (GoL, 2001). The process of acquiring ownership sometimes discourages the farmers. Owing to intricacies involve many people continue to see forestry development as the responsibility of government rather than their own.

4.4 An overview of the Lesotho forestry development programme

Interest in forestry development amongst people proved not to be as high as anticipated by the programme promoters. This has however, been attributed to ownership insecurity. Individual or family forestry projects have been far more successful. People have had little interest in planting trees for purely conservation purposes. The primary purpose has always been its productive entity, conservation being only a secondary benefit. Payment for labour (cash) or for work has frustrated the sustainability of forestry development in Lesotho. This approach has never ensured its protection, management and sustainability. The Lesotho Government, NGOs and other service providers-including donors-have often assumed major roles in tree/forest establishment and in taking responsibilities for what people should be doing for such trees/forests. Local self-reliance has neither been developed nor achieved in the process. The community-centred approach has not been embraced by people because of self-interest and the self-acquisition syndrome evident amongst people. The communal social forestry advocated by the Lesotho chiefs and village heads would have promoted community-based approaches better than group and individual approaches. Also, Government did not keep to the 20% benefit-sharing formula. Moreover, forestry development happens to be long-term project, which does not provide immediate benefits. The people were allocated gullied land on which to plant trees. The application forms to process and secure ownership of such gullied lands are further problems. Above all, the distrust among the people and the local chiefs also never helped the initial practice of the communal forestry programme which, if successfully; would have ignited strong sentiment for the community-based conservation approach. Table 18 summarises the conservation attempts made in Lesotho by the Ministry of Agriculture, as discussed in sections 3 and 4.

Table 18: Conservation attempts by the Ministry of Agriculture, Lesotho

Project	Aim/objective/scope	Outcome	Limitations/Failures	Successes/lessons learned
a) Taung Reclamation Scheme (1956-1961)	To reclaim severely eroded lands through control of livestock.	The people resisted the attempt because they thought that the imposed cattle regulations were unrealistic and unreasonable. These brought conflicts among the people and government staff, which brought the project to an abrupt end.	Local authorities were not properly involved. The control measures were too stringent. The people were not involved in the decision-making process. No proper planning was done.	To reduce 10000 animals in the lowlands overnight to 50 was unrealistic. The project failed and experienced an abrupt end due to the stringent and unilateral cattle regulations. The local people should be brought into decisions that affect them.
b) Tebe-Tebeng Project (1956-1960)	To improve farming practices, create dams and construct conservation structures through integrated approach.	The emphasis on using local chiefs and village headmen caused suspicions, thereby causing considerable tension between government staff and the local people. The project could not be sustained.	The government officers forced it on the people through the local chief and village heads. The project failed to achieve its integrated approach because no good participatory foundation was laid for project implementation.	The project failed to achieve its integrated conservation attempts because the people were not brought in directly. Thus, working with the entire community pays. Not all local chiefs and village heads are actually in full control of their domain.
c) Thaba-Phats'oa area Improvement Project (1967).	The project had integrated objectives, which included establishing tree nurseries with a conservation component and increased crop production.	The initial project investment in nursery development and irrigation scheme was not sustained because of stakeholders' failure to continue the project.	The project was interrupted by the country's political independence process. It failed due to the people's reluctance to participate. Involving the people mid-way the project has resulted in conflicts and confusion rather than project continuity and sustainability.	It was a project inherited from the colonial government. It was beclouded with suspicious and confusion. The autocratic management failed to yied good dividends. Adequate project planning was not done for the participation of all stakeholders.

d) Woodlot Programme (1972-1987).	The objectives of the project were to create forest services and also enhance land conservation.	The programme succeeded but to a limited degree. There was inter-village hostility between project managers and the local community members. This arose due to distrust and the effects of conventional approaches. Woodlots were destroyed when the local people could not be given their entitlements.	The benefits from the programme were not adequately shared. The 20% gross profit was only promised to the local communities to attract their involvement. Therefore, sustainability could not be guaranteed under the atmosphere of distrust and top-down approaches.	The programme succeeded but it could not be sustained because of the managements' unfulfilled promises concerning sharing of benefits. Agreements must be kept and respected and the rewards of any conservation attempts must be distributed adequately to allow for continuity and sustainability.
e) Senqu River Agricultural Extension Project (1972)	The objective of the project was geared towards land conservation and was targeted to achieve self-sufficiency in food.	The mechanical land conservation approaches the people were introduced to collapsed as a result of poor design, lack of communication with the people and maintenance. The people felt that mechanical and modern approaches were either expensive or unprofitable for them.	The heavy rain destroyed conservation structures because they were poorly planned and designed. The conservation structures were not maintained. There was no continuous interaction between project managers and local communities. This created gaps, which negatively affected the project.	One of the lessons learned is that local community members are never interested in long-term conservation projects and those which they feel are unprofitable. Provision should also be made for sustainability otherwise, it is extremely difficult to ensure that local communities continue with conservation projects.
f) Leribe Pilot Project (1973-1997)	The project aim was to promote land resource conservation mainly by building conservation structures. It also encouraged appropriate land use capability research.	The project became elitist and the local people who were ignored in the process could not maintain the conservation structures that were built.	Conservation structures built were not maintained, and the capability research encouraged by the project did not have much impact on the project's sustainability.	One of the major lessons learned is that any conservation project that neglects the roles of the local communities is likely not to succeed. The elite who took over the project were not there on the ground to maintain the structures built.
g) Thaba-Bosiu Rural Development Project, (1973-	The project's main objectives were erosion control and	The project yielded good dividends in terms of capacity	The project was capital intensive and did not allow	The capital-intensive investment may have yielded good

<p>1977)</p> <p>h) Khomo -Khoana Project (1975)</p> <p>i) Land and Water Resource Development Project (1975-1983)</p> <p>j) Intensive Arable Land Projects (1979-1982)</p>	<p>transformation of land use patterns.</p> <p>This was a pilot design to provide extension services as well as construct conservation structures.</p> <p>The project aim was to transfer skills, conservation technology and institutional development of the people to control Lesotho erosion.</p> <p>The objective was to erect conservation structures in the catchment areas of the projects.</p>	<p>building, construction of conservation structures and ensuring good practices such as fallow systems.</p> <p>The project costs were not accounted for, because of lack of coordination. The project was ranked as moderately successful despite the lack of coordination. This is because it made some reasonable impact on the ground.</p> <p>Several conservation structures were built and national personnel trained. However, the conservation structures were not sustained because those who were capacitated were not truly residents of the project host communities.</p> <p>The project resulted into hectares of conservation lands. The people responded in good number but as usual, failed to continue as soon sponsors withdrew.</p>	<p>for indigenous practices. It also provided cash incentive, which has neither been sustainable nor proved to be effective.</p> <p>The project suffered from lack of government support and poor inter-ministerial coordination. An extension worker was not stationed at the project site. The project was poorly planned and this suffered from poor stakeholders' involvement. The project therefore fizzled out.</p> <p>Community involvement was not the concern of the project. The project failed to mobilise local communities because the wrong people were capacitated.</p> <p>No adequate planning was made to sustain the project. Conservation structures were allowed to decay and be destroyed. The local communities were not adequately involved.</p>	<p>dividends, but capital- intensive conservation projects encourage mechanical measures, which often disregard indigenous knowledge and practices.</p> <p>Conservation field officers should be made to live around the project site to be able to have regular and direct contact with the project beneficiaries. The people should also be involved at the planning stages. Government agencies that have a stake in a project need to be coordinated to allow for uniformity in approach and also avoid the duplication of roles.</p> <p>Skills should be transferred to those whose responsibilities are to sustain a particular project. Such people should be identified for capacity building. Funding should be directed towards project sustainability.</p> <p>Sustainability is an important component of any conservation project planning. If it is ignored, there is hardly any way such project can be sustained.</p>
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<p>k) The Production through Conservation Programme (PTC) (1981-1996)</p>	<p>The objective of the project was to combat accelerated land degradation and at the same time support land users in increasing production.</p>	<p>The project developed other components such as land - use planning, forestry and farm improvement. It was based on village development planning procedures. It brought about change of values and attitudes of the people. The project continued for a long time, and people participated despite the limitations experienced.</p>	<p>Capacity building should also involve equipping the people to take full control.</p> <p>It lacked a unified extension approach and adequate follow-up. Low morale motivation, transparency and accountability were experienced. Confusion and chaos were the order of the day and coordination was also lacking.</p>	<p>Any conservation project with diverse components should have a coordinating body/office to avoid conflicts, confusion and duplication of roles and responsibilities. Enhancement of people's morale and motivation/incentives are ingredients of community participation. The extent of participation achieved can be attributed to village-based development- planning procedure employed in the project.</p>
<p>l) Park development in Lesotho (1970)</p>	<p>To conserve and maintain the biodiversity of Lesotho.</p>	<p>The attempt led to further development of other nature reserves by LHDA, and the Mountain Biodiversity Project of the UNDP. The management of the projects will determine whether these parks and nature reserves will be sustained indefinitely.</p>	<p>The management has not been able to bring local communities into the system with open hearts. The original occupants of the lands taken over by these parks have not been rewarded adequately. Neighbours also need to be partners in the management. The past mistakes need to be corrected.</p>	<p>Conflicts and confusion may continue to becloud these attempts unless local communities are given their place in the management process and also share adequately in the benefits.</p>
<p>m) Afforestation development in Lesotho</p>	<p>The objectives of forestry developments are to rehabilitate degrade lands, protect the environment, provide household security in fuel production, and</p>	<p>Several woodlots and social forestry schemes were developed. These developments attracted development agencies to</p>	<p>The security of ownership could not be guaranteed. There were both legal and technical problems of land acquisition. Adequate sharing</p>	<p>The problem of land tenure in the country, self interest and self-acquisition did not allow forestry development to grow and be sustained. The</p>

	<p>to make sound land use plans and land management practices.</p>	<p>develop pilot forestry projects, which facilitated the development of woodlot projects (LWP), community social forestry (CSF) and social forestry programmes (SFP). Because of the feelings of self-interest and the long-term nature of forest development, government plantations are the ones mainly surviving today in Lesotho.</p>	<p>of forestry produce could not be guaranteed because of the conflicts between the local people and the chiefs/village heads. An individualistic approach was encouraged. Scarcity of land for forestry development was also another limitation of forest development in Lesotho.</p>	<p>community-centred approach has not been accepted into the system because of self-interest sentiments amongst the people. The people are also not interested in the long-term nature of forest development. The people need to be mobilised by providing them with sustainable incentives such as secure tenure, seedlings and technical expertise support.</p>
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The following section discusses attempts to combat desertification through the instrumentality of some international organisations such as IFAD, UNDP, GTZ, which have registered their presence in the country by way of impacting on conservation programmes in the National Environment Secretariat, Lesotho.

5. COMBATING DESERTIFICATION IN LESOTHO

Several measures have been taken by the Government of Lesotho to address the issues of drought and desertification in Lesotho since the ratification of the United Nations Convention to combat desertification. Lesotho became the first African country and the fifth amongst the United Nations Organisation member countries to consent to combat desertification (UNEP *et al.*, 1998). This explains the interest Lesotho government has for conservation of her land resources. However, considering the efforts by the government and other organisations such as United Nations Development Programme, International Food Agricultural Development, and so on, towards combating desertification in Lesotho, it becomes obvious that land degradation and land rehabilitation in the country are not new. They have continually been the concerns of the government and other organisations. The government has demonstrated keen interest to conserve the land and the land-based resources. However, individual Lesotho citizens have not met this concern by assuming appropriate responsibilities and initiatives. Although Lesotho rural people realise the problem of land degradation due to soil erosion, most of the efforts of the government and programmes supported by NGOs have not been very successful, as land degradation continues unabated. It has always been argued that it might be possible that the root causes of the land resource degradation problems have not yet been addressed. To take the bull by the horns, the Government of Lesotho in 1996 established an environment-coordinating body known as the National Environment Secretariat (NES) under the Ministry of Environment and Tourism to deal with the matter.

Many outreach, educational and campaign programmes have been mounted by National Environment Secretariat (NES). Currently, NES is running and coordinating other environmental projects, such as the Environmental Management for Poverty Reduction (EMPR), the Environment Impact Assessment (EIA) and the most recent project on conserving the Mountain Biodiversity of Southern Lesotho (CMBSL). Of these, the project that is most widespread among Lesotho communities and which has been on the ground and attracted the interest of this study, is the Environmental Management for Poverty Reduction Project. This is so because it has been implemented for some eight years and is at present being implemented in the ten districts of the country. Moreover, the target participants (youth) are of particular interest to the study because they are the leaders and future hopes of tomorrow who need to be put on the right track to be able to plan how to conserve and sustain land resources for future generations.

5.1 Structure in place to combat desertification in Lesotho

In compliance with the terms of the convention to combat desertification in Lesotho, the government has set up a multi-disciplinary National Desertification Steering Committee to oversee, in collaboration with NES, the implementation of the National Action Plan. The committee according to NES (2004:13) includes the following institutions in Lesotho:

- National Environment Secretariat (Coordinator)
- National University of Lesotho
- Natural Resources (Hydrology and Meteorology)
- Ministry of Agriculture and Food Security
- Ministry of Forestry and Land Departments:
 - Soil and water Conservation Management
 - Range Management Department
 - Forestry Department
- Ministry of Local Government
- Disaster Management Authority
- Lesotho Council of Non-Governmental Organisations (LCN)

- Other NGO's that deal with afforestation and soil conservation

The above committee is responsible to the Director of Environment Department. The committee advises NES on matters related to land degradation. At the district and local levels, the structures consist of the District Secretary, Heads of departments at the district, Principal chiefs, selected number of representatives of the Local Authorities, Development Councils and Representatives of NGO's. At the local level, it is the Local Authorities responsible for planning development activities.

5.2 Profile of challenges to combat desertification in Lesotho

The attempts made by Lesotho government to combat desertification through the structure outlined under 5.1 had several challenges that include the following:

- **Coordination**

The coordination of activities designed to combat desertification has been neither consistent nor coherent. Different core ministries in Lesotho engaged in activities to combat desertification usually consider what suits them and what they think is right. Generally, attempts to combat desertification are focussed at addressing land degradation symptoms rather than the causes. Beside the above observation, NES, which ought to coordinate activities regarding land conservation and rehabilitation, has also been deeply engaged in implementing conservation and rehabilitation programmes. Beyond this, NES is a Department of the Ministry of Tourism, Culture and Environment with no authority over other departments or ministries engaged in environmental matters. Therefore, its roles have been more of advisory rather than coordination. For the reason of lack of authority, the ideal would be to establish an independent authority with due legal and enforcement powers on environmental matters.

- **Funding**

Funding of land conservation and rehabilitation activities has been a major challenge to Lesotho government. It is a fact that Lesotho government has made some serious

attempts to address land degradation in the past 2-3 decades. The most recent step taken by Lesotho government is the establishment of the Ministry of Forestry and Land Reclamation. However, it appears that rehabilitation of rangelands is reserved for NGO's and donor agencies. Moreover, there has been a lack of adequate budgetary support for major programmes, while some major rehabilitation programmes are partially funded through other related activities as a sub-item in others.

As a result of a lack of funds, the government currently focusses on tree planting to score political points. As pointed earlier, the main sources of financing interventions to combat desertification have been from Lesotho Fund for Development, Lesotho Highlands Water Authority and international donor agencies.

- **Extension services**

The quality of extension staff has also been a challenge because the quality of extension services has been weak. Extension staffs have lost focus. They only take directives from political heads that want to tell voters how many trees have been planted but without records of survival rate. The challenge therefore is to train the extension staffs so that they are able to advice the political heads of the need to address the root causes of land degradation, when to plant trees, as well as about measures to increase survival rates.

- Other challenges include inadequate information to help guide decision makers. The government lack the will to gather; analyse and manage information on land degradation. Poverty in Lesotho is again being escalated due to the rising level of unemployment. The high HIV/AIDS prevalence which ranged between 31 and 35%; low environmental awareness among policy and decision makers; low and weak institutional capacity to deal with environmental problems; legal impediments and poor law enforcement by the policy makers have combined to pose serious challenges to combat desertification in Lesotho.

6. LAND RESOURCES CONSERVATION AND RURAL DEVELOPMENT IN LESOTHO

Land resources conservation in Lesotho cannot be separated from rural development in broader terms. Land resources conservation in Lesotho revolves round the peoples' survival and well-being. This is because land resources degradation has been one of the most developmental crises Lesotho faces for decades. Combating desertification successfully would mean a successful beginning of rural development activities in Lesotho. In fact, provision of infrastructure, which a layman would see as the beginning of rural development, cannot all be sited on environmentally degraded lands. Therefore, to ensure effective and sustainable rural development initiatives, conservation of land resources and rehabilitation of degraded lands have to be the starting point so that the people can survive to participate in the rest development activities.

7. ENVIRONMENTAL MANAGEMENT FOR POVERTY REDUCTION PROJECT (EMPR)

This section focuses on Environmental Management for Poverty Reduction projects (UNDP sponsored project in Lesotho) as an empirical case study. Attention is given to the practice of real community participation in the project. It also examines levels of participation, and the good and bad conservation practices of the project. The purpose of these assessments is to enable lessons learnt to be used in the future land resources conservation programme.

Environmental Management for Poverty Reduction (EMPR) was established in 1996 to address the following:

- To identify problems of land degradation in both rural and urban areas of Lesotho;
- To provide hands-on training of the youth on proper environmental use and management;

- To increase the base of potential trainers on environmental issues at the community level;
- To promote popular participation; and
- To address the problem of unemployment among the youth in Lesotho through the rehabilitation and management of land resources (EMPR, 1996).

7.1 The project component and target participants

The targeted participants are youths who have been out of school for two or more years (youth school dropouts)² and youths who have never been to school at all and are somehow disadvantaged but physically capable. The EMPR was designed to educate the youth about the environment and how to protect and conserve its land resources. Under this project, the youth are taught to rehabilitate the degraded lands through soil conservation measures like tree-planting and building stone structures in dongas / gullies and degraded lands. The project has a poverty alleviation component, where youth are engaged in environment-friendly enterprises e.g. collection and selling of cans. They also clean the environment, produce and sell tree seedlings, as well as engage in some businesses like livestock and vegetable farming.

6.2 Implementation of conservation programme

In assessing the performance of the EMPR project, one would remark here, that it is almost too early to make a convincing evaluation of the project performance because gullies take years to fill up and planted trees also take years to grow. However, the initial enlistment of youth into the project has been enthusiastically high. The project components have been attractive to the youth with the monthly payment of 200 Maloti³ per participant (EMPR, 2001). Noteworthy is the number of youth participants, which has been on the increase. While the project has been extended to all districts of the country, new participants and groups have replaced the initial ones. This study has also taken particular interest in the root cause of the increase in the number of the participating

²The term 'youth school dropouts' used in this study is adapted from the EMPR project document. The term describes the project target participants. The youth school dropouts referred to are those who fall between the ages of 15 and 24 years and who, for various reasons, could not continue their education. According to the project document, these youth dropouts are mainly primary and post-primary schools.

³ 200 Maloti means – R200

youth groups in the project, and the issue of sustainability-especially after the withdrawal of the technical expert. The youth have been trained to enable them to train others on land rehabilitation activities.

However, whether Lesotho government will be ready to continue to support the project, remains an issue. In any case, it was extended for another one year since January 2004 with additional sponsorship from the United Nations Development Programme, the Government of Lesotho, and the South African and The Netherlands governments.

As at the time of this study, the project duration has just been renewed and is in a transitional stage. Recruiting participants in the communities where there were no participants and establishing new groups were ongoing activities. The only anticipated fear would be the choice of participants in the recruitment exercise. The choice fell on those faithful to the ruling party and those who support the government's environmental programmes. However, the involvement of politicians in the selection exercise has produced some further enthusiasm among communities. EMPR (2001) show a dramatic increase in the number of participants. Moreover, the previous target of 1 650 participants in the project has also been increased to 2 334 participants for the year 2001. Consequently, this has improved and strengthened government's funding, which will predictably impact on the extent of land reclamation and rehabilitation in Lesotho in general, and, the lowlands in particular. Tables 19, 20, 21, 22, and 23 show the phases and the number of groups and participants in the project between December 1999 and April 2001.

Table 19: EMPR Project implementation phases and level of participation, 1996-1999

Project Phases	Districts	No of sites per district	No of Youth
First Phase 1996 – 1997	Berea	8	195
	Mafeteng	6	135
	Mohale’s Hoek	6	136
Second Phase 1997 – 1998	Quthing	9	135
	Qacha’s Nek	6	135
	Thaba – Tseka	6	135
	Leribe	6	135
Third Phase 1998 – 1999	Maseru	9	135
	Butha – Buthe	6	135
	Mokhotlong	6	135
Total	10	68	1450

Source: EMPR (2001)

The project was initially implemented in phases. The first phase, which started in August 1996, had its coverage in only three districts, namely Berea, Mafeteng and Mohale’s Hoek. In April 1997, it was extended to Quthing, Qacha’s nek, Thaba-Tseka and Leribe. In February 1998, the project started its third phase with further extension to Maseru, Butha-Buthe and Mokhotlong (EMPR, 2001). However, the following table shows the groups and the number of youth participants within the period 1999-2001 when the project has the coverage of the ten districts of Lesotho.

Table 20: EMPR records of Youth participation between December 1999, and April 2001 in the ten districts of Lesotho.

District	Year	No of Groups	No of Participants
Maseru	1999	8	118
	2000	21	208
	2001	25	220
Mafeteng	1999	-	-
	2000	6	87
	2001	19	280
Berea	1999	-	-
	2000	15	153
	2001	23	230
Quthing	1999	4	42
	2000	2	24
	2001	10	139
Thaba-Tseka	1999	3	27
	2000	-	-
	2001	13	205
Butha-Buthe	1999	6	104
	2000	4	73
	2001	23	346
Mohale's Hoek	1999	-	-
	2000	-	-
	2001	15	325
Qacha's Nek	1999	1	3
	2000	4	95
	2001	5	95
Mokhotlong	1999	7	113
	2000	6	31
	2001	12	205
Leribe	1999	3	40
	2000	13	181
	2001	14	289
Total			2334

Source: EMPR (2000/2001)

The above table shows that between the periods stipulated above, there was a significant increase in the number of youth participants in the project. Of the ten districts of Lesotho, only Maseru had a short fall in the number of participants and this was probably attributable to the late recruitment exercise of participants in the district. As at the time of this study, a new recruitment exercise has not been carried out in the Maseru district. However, the above table shows a progressive increase in youth involvement in the project. In the table below, the project impact in terms of absorbing youth dropout the

area of land rehabilitation is demonstrated.

Table 21: Estimate of youth school dropouts and level of involvement in EMPR Project between 1999-2001

District	Number of youths - 20-24 age group population	Estimate of dropout rate per district	Number of youth participating in EMPR per district between 1999-2001	% of youth absorbed between 1999-2001
Maseru	38348	10.7	546	13%
Mafeteng	20082	16.3	367	11%
Berea	21956	11.6	383	15%
Quthing	11411	20	205	8%
Thaba-Tseka	11603	18.2	232	11%
Butha-Buthe	10098	10.6	523	48%
Mohale's Hoek	16326	16.9	325	12%
Qacha's Nek	6611	15.1	193	19%
Mokhotlong	7750	22.6	349	20%
Leribe	27910	15.6	510	12%
Total	172095	14.1%	3633	17%

Sources: EMPR (2001); GoL (2001); LBS (1996) & MoE, (2000 & 2002).

School dropouts are those who dropped out of a particular school system for various reasons. Of this figure of 14.1%, those who continued their studies elsewhere could not be established. It is, however, true, that some who are deemed to be dropouts either migrated to South Africa or joined other school systems within the country (and in some cases) private schools that are not registered by the government. This being the case, this study observes that the figures from the government database sources may have been over-estimated. However, based on the available sources, the project has absorbed between 8% recorded in Quthing and 48% in Butha-Buthe districts. This puts the national record of youth participation at 17% of estimated school dropouts. The substantial record of youth participation does not mean that the youth between the ages of 20-24 in the rural communities absorbed into the project are numerous. There is confirmation that many more are either employed in the factories in Maseru, Mafeteng, and Maputsoe or in the South African mines.

7.3 Land rehabilitation activities of the EMPR Project

The EMPR Project, through youth participants, has successfully built structures in gullies, planted grasses and trees, constructed and rehabilitated earth roads and developed vegetable farms on rehabilitated lands. The table below shows detailed records of the project's activities in the country.

Table 22: EMPR conservation achievements for the period 1996 – 2001 June

District	No of Stone Checkdams	Rehabilitated area in hectares	No of Nurseries	No of Conservation structures	Metres of level bunds
Mohale's Hoek	699.10	500	6	3	0
Mafeteng	727.50	400	6	4	0
Berea	757.00	600	8	4	70
Quthing	555.00	520	9	2	0
Qacha's Nek	378.00	505	6	0	0
Thaba-Tseka	827.00	620	6	0	120
Leribe	410.00	425	6	2	120
Maseru	476.50	525	7	5	0
Butha-Buthe	483.00	322	5	0	0
Mokhotlong	469.00	200	5	0	0
Total	5 782.10	4,617	64	20	310

Source: EMPR (2001)

The table above shows the record of conservation achievement of the project. The project has its numerous youth groups which have built 5,782.10 stone check-dams structures, rehabilitated a land area of 4617 hectares, developed 64 nurseries, 20 conservation areas and 310 metres of level bunds (embarkments).

Furthermore, in the area of project achievement in between 1997-1999 in the area of afforestation through planting of trees, the project has the following records. (see Table 23 below).

Table 23: EMPR Project annual forestation records, 1997-1999

District	Trees planted in 1997	Trees planted in 1998	Tree planted in 1999
Mohale's Hoek	4588	5942	1925
Mafeteng	5440	3980	2715
Berea	4458	2856	NIL
Quthing	NIL	11678	1483
Qacha's Nek	1216	5416	NIL
Leribe	NIL	11750	300
Maseru	"	572	4000
Butha-Buthe	"	500	3170
Mokhotlong	"	NIL	6000
Thaba-Tseka	"	5115	5825
Total	14846	47810	25418

Source: EMPR (2001)

The above table shows the number of trees planted in 1997, 1998 and 1999 in the ten districts of Lesotho. The fluctuation in the total number of trees for 1997, 1998 and 1999 is attributed to the project's emphases. The EMPR (2000) points out that in 1999 there was greater emphasis on building stone structures along gullies and more time was also devoted to nurturing the trees planted rather than on recruiting more participants into the project. The argument was that time was needed to nurture what had been invested and the year 1999 was mapped out for these tasks. The implementation of the project was not without some negative consequences. These are outlined as follows:

The project's achievement as shown in Tables 22 & 23 can be compared with the results of Intensive Arable Land Project shown in Table 17. The difference can be traced to the fact that the Intensive Arable Land Project had a wider coverage in terms of participation and institutional framework. The EMPR has only involved the youths, had limited coverage and institutional framework. In the area of capacity building, the EMPR project can be said to have excelled over and above the Intensive Arable Land Project.

7.4 EMPR Project: Lessons to be learned

The project design and management practices have had some consequences, which are good lessons to learn for the future in community-based projects:

- Some of the new groups, that emerged in the same villages where groups already existed, were not allowed to continue work on the old sites where the old or former groups were working. In such cases, new sites were developed, thereby causing the uncompleted old sites to be abandoned.
- Participants work only on the days they expect their field officers to visit, most times at the end of each month when their monthly remuneration is paid. This practice has continued despite management threats not to pay participants or groups that fail to carry out any rehabilitation work within a month.
- There is no close monitoring of the groups until the monthly routine payment exercise is carried out. The field officers have attributed this to the inadequate number of official vehicles for fieldwork.
- The motorcycles, which the field workers are given, appear to be too big and therefore, are not being put to effective use because of the nature of Lesotho's terrain. Again, as some of the field officers are women, they are reluctant to use a motorcycle. For these reasons, the field officers have abandoned the (extra-large) motorcycles and quarrel to obtain one of the few available motor vehicles (4 x 4) to accomplish their field assignments and other services.
- The remuneration formula, which reduces participants' monthly pay by M50.00 annually, affected the number of participants during the first four years of the project. Thus, the number of participants' reduced year-by-year as participants' monthly 'take home' remuneration reduced from an original M200 to M150.00 during the second year of recruitment, M100.00 the third year and M50.00 the fourth and last year of engagement. Having realised the implications of this retrogressive financial incentive, the project renewal package has introduced some changes, which include the duration of engagement and the remuneration formula. Currently, participants are engaged for only one year and earn M100.00 per month for the period. By this change, the project shall have involved 12,000 participants during the three-year period of extension, which will far out-number the 1650 target participants per year in the project's first four-year phase (1996-2000) (EMPR, 2001). Consequently, the project may be failing to achieve the

desired continuity of participants which is required for project sustainability. Besides, bad blood may be created between the old and newly recruited participants. This atmosphere is not likely to change since participants are engaged for a one-year period.

- The promotion of community-centred conservation is also likely to have been wiped out in communities where such groups exist because of the projects' encouragement of financial incentive for any conservation work. However, some see it as an adequate incentive for people to participate. Yet, the problem of not participating without such financial incentive remains unresolved, and this may remain a hindrance to conservation of land resources for decades to come.
- Other community members who do not belong to any of these groups are reluctant to participate in any environmental management and land resources conservation work. This is because it is currently assumed that only the selected group members who are rewarded monthly are to do all the land resources conservation work in the communities where such groups exist.
- The field officers are practically engaged to disburse monthly youth remuneration rather than themselves being engaged in extension assignments. Besides, the ten field officers covering the ten districts all reside in Maseru. The relevance of the 'position' of field officer has been betrayed by the negative shift of responsibility from being a field officer to that of being an accounts clerk who disburses monthly youth remuneration. The situation as at the time of this study shows that the project can also succeed without the highly paid field officers. The various community development committee members and village heads can be used to perform the present roles of the field officers.
- The project approach has not embraced the principles of community-centred conservation programme. The use of groups instead of involving the entire community indicates a particular interest in segments of the community. Admittedly, the project document stipulates the target participants to be "Youth school drop-outs".
- The project incentives are not sustainable enough. A group of youths are expected

to set up an income-generating enterprise out of participants' one-year earnings. The question here is whether R100 per month is sustainable for a jobless youth? While this study subscribes to providing incentives to participants, it upholds sustainable types of incentives. The project has a very poor record of surviving groups after the one-year training period. Consequently, these groups end their existence as soon as the project withdraws funding and technical and material support.

- In the Leribe, Maseru and Qacha's Nek districts, field officers were convincingly found to have both defrauded and frustrated the project by fraudulently inflating the number of participants and youths groups that never existed to generate money for themselves. In some cases, participants were not paid for months and in other cases, working materials, seedlings and other resource provision meant for the project were diverted by project officers to their own use (EMPR, 2001).

Before this report was submitted, the project management introduced a control measure whereby soldiers are to be engaged on a monthly basis to accompany the field officers during monthly payments of participants' remunerations. The purpose, we guess, is to check and to ensure that participants are paid. The question, however, is whether the soldiers are free from fraud. Can't they be bought over? Above all, money that would have made the project financial incentive package sustainable to participants, while also capacitating community members, is now paid to the soldiers witnessing the disbursement of M100 to each participant. Such acts of misappropriation of funds made available for a conservation project are crucial issues in a conservation management project. This is because misappropriation could impact on the local community level of participation in conservation programmes.

8. CONCLUSION

The chapter dealt with Lesotho's environmental situation in terms of land resources conservation. The first phase of discussions outlined Lesotho's geographical and

ecological background. The chapter acknowledged the potential peculiarities of Lesotho's land resources. It also addressed the historical perspective of some selected conservation initiatives undertaken by the Lesotho Ministry of Agriculture and Environmental Management for Poverty Reduction Project. While applauding good conservation practices, the study also frowned upon the poor practices. Due to the poor practices, land degradation appears to be on the increase despite the numerous conservation attempts.

Despite the good number of conservation attempts made in Lesotho, there has been no mass-based environmental movement until very recently. The dominant understanding of environmental issues in Lesotho has hitherto been from the authoritarian conservation perspective, where conservation approaches disregarded the indigenous knowledge, the rights and the dignity of the people and was almost totally divorced from sustainable development. The forced removal and social dislocation of Lesotho citizens were common and these were contributed to public resentment of conservation policies, no matter how logical or necessary such policies may have been. A cursory look at the environmental conservation efforts in Lesotho shows that the basic principles of environmental management policies have not been met and that the successes of the conservation movement are far outnumbered by the failures. The above notwithstanding, it must be appreciated that due to the total pressure of developmental challenges, the Lesotho government has not the means, institutional capacity, will etc to effectively engage in a national conservation framework. This has placed the country's conservation priorities between top down global agendas and local communities preferences.

In general, one would say that despite the numerous conservation measures applied so far in Lesotho, not much has been achieved in terms of capturing a high level of community involvement. The end of every project has a sad story of either there was confusion between the community and government or that the people were reluctant to participate. Ordinarily, one would have expected that, when the first batches of conservation projects failed to achieve the desired goals of sustained conservation measures, researches geared towards the community-based approaches could have been commissioned. Possibly, this

could have curbed or reduced the escalating land degradation problem in Lesotho. There is also clear evidence to vindicate individual Lesotho citizens for their feelings and desires which include: the empty and unfulfilled promises from government, the inappropriate land tenure systems, the unsustainable incentives, the exclusion of people from decision-making processes and the inadequate benefit-sharing. The above notwithstanding, it must be appreciated that due to the total pressure of developmental challenges, the Lesotho government has either not the means, institutional capacity, will etc to engage sustainably and successfully towards a national conservation framework. This has placed the country's conservation priorities between top down global agendas and local communities preferences. To address these issues, a trial collaboration or joint management approach geared towards achieving sustainable land resources conservation and management programmes may be a possible way out of the hitherto fruitless attempts. While also pondering on the continued land degradation and possible sustainable measures, Chapter Five discusses data gathered and presents findings.

CHAPTER FIVE

DATA PRESENTATION AND ANALYSIS

1. INTRODUCTION

This study was conducted in six selected communities in Lesotho, as shown in Tables 5 and 6 in Chapter One. The analysis of findings draws upon data from these six communities and also two conservation agencies, which included the Ministry of Agriculture and Natural Resources (Lesotho), and the Environmental Management for Poverty Reduction Project (a UNDP project in Lesotho). The data gathered are discussed under different sub-headings. Issues raised during focus group discussions with the local communities, as well as interviews held with conservation officers, are grouped into two separate sections. The grouping of discussions into two sections is to ensure clarity about the views expressed by the local communities and about those of the conservation officers. However, fusing items of similarity together in some instances during the process of analysis is done to reduce the size and length of data. A third section details the lessons learned. The lessons learned and how such lessons relate to the future of community-based conservation are clearly stated in the third section.

2. OPINIONS OF LOCAL COMMUNITIES ABOUT CONSERVATION OF LAND RESOURCES PROGRAMMES

This section presents the outcome of the focus group discussions held with the local communities relevant to this study.

2.1 Causes of land degradation in the study areas

On the issue of land degradation, the study participants pointed out that land degradation in the areas of study is caused by both erosion and human activities. Participants related the impact of erosion on the inhabitants of lowlands:

Erosion of land starts from the mountains, but impacts much devastating consequences on the lowlands. Participants added: Even when trees are planted and replanted, they die off under conditions of harsh weather, leaving the few surviving trees at the mercy of the grazing animals (Direct communication with local communities).

Participants also agreed that the topography of the lowlands, the poor soil composition, deforestation, poor farming practices, land tenure systems, the poor attitude of local communities towards land, poverty and the over-stocking of animals are some causes of land degradation in the study areas. The above-mentioned causes of land degradation are in line with the causes of land degradation as stipulated in Chapter 2 (see Figure 1) and as outlined by the following writers: Ayoub (1999), Botha & Fouche (2000), Bromley (1994), FAO (1999), FAO (2000), Morgan (1994), NFAP (1996), Owen & Unwin (1997), UNEP *et al.* (1998), UNEP (2000) Whiteside (1998), and Yeld (1997).

The study participants also acknowledged that over-population of humans and stock has led to the destruction of trees and shrubs in the study areas. EMPR (1999), Kabul, Kumar & Puri (1999), and Pelsler & Khrehloa (2000) also agree that the above are major causes of land degradation. However, Kharin's (1997) research findings, based on experiences in Malawi and Sudan, disagrees that over-population causes land degradation. He rather argues that over-population instead could encourage land conservation. Ahuja (1998), who tries to support the view that over-population causes land degradation bases his reasons on the fact that the smaller and more ethnically homogeneous communities are, the better and easier such communities are able to coordinate conservation activities. Ahuja, however, does not give any evidence in support of how negatively heterogeneous communities affect conservation activities. Yet, over-population has not been known to be a major problem in Lesotho; the traditional mechanism for land distribution makes the system look as if land is scarce in the country as a result of population explosion. The truth is that Lesotho's landscape, its rocky nature and the extent of land degradation in particular in the study areas, have created a scarcity situation for land administration. While this study also acknowledges the fact that population growth can cause land

degradation, it also supports the view that land degradation encourages conservation activities.

2.2 Awareness among the local communities regarding the scale, scope and priority of land degradation challenges

Local communities described the scale and scope of land degradation in their immediate environment as huge and therefore, beyond their capacity to tackle without external intervention. Participants also acknowledged government's relentless attempts to educate the local communities about the scale and scope of land degradation and possible ways of combating the causes. Participants further accepted that such knowledge have not seriously changed the situation on the ground. They rather stressed that government agencies needed to confront and combat the existing extent of land degradation within local communities while the people provide the required labour services.

On the issue of land degradation challenges, participants stressed that: *"[W]e are currently faced with erosion of both top soil and vegetative cover. The negative impacts of this have been worsened by the current drought and famine that have left us at the mercy of the World Food Programme. Otherwise the death rate arising from hunger could have added to the increasing death rate resulting from HIV/AIDS pandemic in our local communities. As participants further stressed: [W]e have been educated with the mechanical approaches to conservation. Unfortunately, there is just little we can do to help ourselves. The scale of land degradation is beyond our capacity".* (Direct communication with local communities).

2.3 Effects of continuous land degradation on the local communities

As participants noted, *"if the scale at which our land is degrading is allowed to continue we may find it difficult to feed ourselves in the near future. Currently, we are able to feed because of the World Food Programme's regular supply of maize meal to our communities"*. Participants also stressed that local inhabitants have been migrating to urban areas for survival while others are crossing to South Africa. According to

participants, the current retrenchment of Lesotho citizens at the South African mines and the closure of factories and the on-going retrenchment in the existing factories, may increase the pressure on the available lands. This is because the number of returnees to rural communities will certainly be on the increase.

2.4 Past and on-going land resources conservation initiatives in the study areas

Local communities confirmed that they had experienced government land resources conservation projects. On the ground there was demonstrable evidence to authenticate the fact that collaborative conservation works have been experienced in the study areas. The people, however, agreed that the level of community involvement differs among the areas and so do the conservation initiatives. For instance, Ha Setlako-tlako, Ha Mosotho in Mafeteng district and Rankhelepe in Maseru district are good examples of local communities where some significant land resources conservation attempts are made to tackle land degradation problems. Examples are patches of conservation stone structures built across gullies to check erosion in every nook and cranny of these local communities. Vegetative cover measures, such as trees planted, were also observed. It must however, be mentioned that most of the conservation efforts referred to were either the efforts of government, donor-supported initiatives or the efforts of a few individual local farmers. The table below provides clarity, on some of the conservation attempts noted in the local communities studied.

Table 24: Conservation projects in the study communities

Community	Projects Completed	On-going projects with government assistance
Ha Mosotho	Planting of trees/fruit trees	Land and gully reclamation, tree-planting and other vegetative cover activities.
Matsoseng	Planting of trees/fruit trees, earth road rehabilitation work	Land and gully reclamation and tree-replanting activities.
Ha Setlako-tlako	Planting of trees/fruit trees; earth road maintenance work	Fruit tree-planting and erosion control structures such as check dams.
Ha Rankhelepe	Planting of trees/fruit trees	Fruit tree-planting, land reclamation and erosion control structures (check dams and grass planting).
Ha Tsilonyane	Tree-planting, earth road rehabilitation	Fruit tree-planting, land reclamation and rehabilitation activities.
Ha Khoabane	Tree-planting and earth road rehabilitation work	Land reclamation and tree/fruit tree-planting and erosion control activities.

Table 24 shows the types of conservation initiatives the people are involved in the study area. It also shows the kinds of conservation initiatives, which demand resources that could be sourced internally. It also shows the on-going conservation efforts that are receiving government/external assistance.

Despite the conservation attempts made by some individuals and groups within these local communities, there are several fields that are abandoned, uncared for or unprotected. These fields, according to the people, accelerate runoff, which in some cases damages adjoining fields which are properly managed. The people also confirmed that abandoned fields belong mainly to absentee farmers. These groups of absentee farmers who seldom look after their fields are either civil servants or those who possess more fields than they require. Participants also hinted that they are also the privileged few who hold on to their privileged positions to acquire fields at the expense of the majority of the poor, who, due to some circumstances, have been compelled to become paid labourers working in the fields of the few privileged land owners. It is also important to observe here that these absentee farmers do not consider conservation of land resources as a priority: they have dependable alternative means of livelihood in the urban areas where most of them reside.

2.5 Local communities' involvement in past and on-going conservation projects

Having identified the local communities' major conservation activities, participants revealed that local community members who get involved in conservation activities are mostly male adults. They added that female adults mainly participate in maintenance of earth roads. Participants also acknowledged that youths who are participating in conservation activities are the youth EMPR groups.

On the issue of male/female participation in conservation activities, it must be pointed out that the EMPR project ratio for male/female recruitment is 2:1. The project policy justifies this ratio with the argument that women, by nature, are not suited to conservation work. Contrary to the male/female ratio set for recruiting participants in the EMPR

project, this study has revealed that some of the EMPR youth groups have a predominantly female membership. To be specific, some of the groups in Maseru and Mafeteng districts have 80% female and 20% male members (EMPR, 2000). The high enlistment of females in the EMPR project attests to the interest females have in conservation activities. With this, it is clear that women would have participated more in the government conservation activities had they been given equal access and rights to land with their male counterparts. As Kothari, Anuradha & Palthak (1998) noted, women environmental interventions in Indian Himalaya, Chiakpo and Rajasthan cases led the Indian government to further promote female participation in land resources conservation activities. Joekes (1994) also agreed that women's participation should be promoted. Joekes yet, expressed fears about the reversion of the role of women with regard to land resources conservation. Beside the above illustration on male/female participation in the EMPR project, it is important to also mention in general that local communities' participation in conservation and rehabilitation activities is evidence in the areas of study. As earlier pointed out, patches of conservation attempts are observable in every nook and cranny of the local communities. However, participation is not total, and again, conservation attempts are limited to the scope of local communities' capacity.

2.6 Awareness of current land resources conservation practices

On the issue of awareness participants were unanimous about the means by which they are educated about the current land resources conservation practices. They agreed that the most consistent means have been through the government extension workers and a few individual farmers who had had opportunities to learn from either the enlightened farmers or agricultural extension workers. They also agreed that extension workers organise "Pitso's" (village meetings) where the entire adult village members are involved in training sessions. Other means pointed out by participants are radio talks, posters and flyers often distributed by government agencies.

Further on this issue, the government officers pointed out that conservation good practices are brought to the local communities through the following means:

- Extension workers' talks at village meetings
- Extension workers' regular visits to land users' fields to give technical advices about land resources conservation
- Organising workshops for Village Development Committee members'
- Radio talks on land rehabilitation and conservation management
- Distribution of flyers and posters that carry messages about managing land resources conservation and rehabilitation initiatives
- Distribution of environmental management and land resources conservation training manuals
- Special conversation outreach programmes for children at schools, colleges and higher institutions have also been strategised.

Local communities acknowledged the above while discussing with them.

The strategic school programme is in line with Staszenski's (2000) laudable idea, which states that school children should be involved in land resources conservation, while stressing that when the children leave school, that they are likely to change their parents' attitudes and behaviour with regard to conservation of land resources. Participants further revealed that local communities have found the field workers visits to the fields of individual farmers to be more effective than those conservation training manuals, flyers, radio talks and talks at village meetings.

2.7 Controlling numbers of livestock

The question of controlling the numbers of livestock in the study areas was not received favourably. This is because the rearing of animals has been the people's major source of income and livelihood particularly for most families that do not have arable lands for cultivation. Participants agreed that overstocking has been a major contributory factor to land degradation and that it has also frustrated most attempts to revegetate their lands. Participants claimed not to know how the herdboys graze their animals on the protected land areas because of the distance between their villages and the grazing areas. Ayoub (1999), FAO (1999), Bureau of Statistics Lesotho (1998), NFAP (1996) and Whiteside

(1998) agree that overstocking accelerates land degradation. As participants unequivocally remarked, *[W]e cannot control stocking unless we are provided with alternative means of survival*. Historically, it is recalled that Taung Reclamation Scheme of 1956-61 came to an abrupt end because of the disagreement between the colonial department and the people about the stringent control imposed on livestock holding (Chakela *et al.*, 1983). The people described the regulation as unrealistic and unreasonable (MoA, 1988). (see Chapter Two section 4, 4.2 and Chapter Four section 3, 3.1).

It has been established from discussions with participants that the rural Lesotho citizens are not ready to reduce and control stocking of livestock because of economic considerations. According to them, the following reasons account for why the people may continue to overstock despite environmental considerations:

- Livestock remains the preferred form of investment for Lesotho citizens working in South Africa. Remittances to Lesotho are commonly invested in livestock, which provides reasonable returns compared with other limited alternatives available to the people.
- Livestock remains an important source of livelihood and also depicts status.
- Livestock ownership continues to have an important social function in connection with transportation, marriages, funerals, royal gifts, ploughing and so on.
- Communal ownership of the rangeland in Lesotho provides little immediate reason for individuals to practise restraint in use by reducing herd size; and
- It also provides a major source of protein for the people.

With the aforementioned importance attached to the ownership of livestock, it is apparent that any attempt to regulate livestock holding without providing the people with alternative means of livelihood may also be met with endless conflict.

2.8 Introducing a land resources user-fee

Participants are unanimously opposed to the introduction of a land resources user-fee, arguing that land resources are a free gift of nature and should not be paid for. However, participants agreed that there was a need to replant trees cut down as well as re-vegetate land covers removed. The question of land resources which cannot be replanted was met with an angry response: *[W]e are not ready to discuss the matter beyond saying that other land resources that cannot be replanted are also a free gift of nature and cannot be paid for* (Direct communication with local communities).

This type of free gift attitude towards land resources is why Nihal (1997) promotes user-fee economic mechanisms. He emphasises that the R51.7 million realised in three years in an Indian community through the introduction of user-fee ensures the sustainability of conservation activities in the community. Blum (1997), FAO (1999) and Summers (1999) also frown upon the view that land resources are a free gift of nature. These writers agree that this is so because no economic gain or loss is recorded in the basic accounting network when land resources are used. This is true of the use of land resources in the study areas. The people, however, feel that land resources conservation can be made more profitable, without suggesting any meaningful ways and means of actualising this dream.

2.9 Perception of local communities' land resources conservation knowledge

The study examined the relationship between local communities and government officers in this regard. In the process, local communities expressed disappointment about government officer's disregard for indigenous knowledge. References were made to what officers said while addressing village workshops/meetings and noted that government officers have never acknowledged local knowledge and the local communities' potential in conservation activities. Participants gave instances of local knowledge and practices of mixed-cropping. According to participants, this practice maintains fertility of land, soil moisture and also increases crop yield. This practice was reversed by conservation officers for practices which involve the use of chemical fertilisers that only enrich

productivity without improving the quality of land. Officers who commented on this issue also agreed that local communities have a good history of mixed-cropping. These officers further attested to the effectiveness of indigenous practices and owned up to the misleading roles played by conservation officers in terms of conservation measures.

In support of the above instances, Cock & Fig (2000), Pimbert & Pretty (1998), O’Riordan (1995), Schafer & Bell (2002), Songorwa (1999) and Stocking & Garland (1998) noted that the transfer of western conservation measures and approaches to developing countries has indeed had adverse effects on community participation in land resources conservation activities. The positive remarks of the conservation officers about indigenous conservation knowledge and techniques reinforces Ghai’s (1994) observation about some recent researches on the traditional resource management system, which have disproved some earlier negative views on indigenous knowledge. Local participants further revealed that some land users no longer listen to conservation extension workers because of conflicting and contradictory official measures towards solving a particular conservation problem: *[W]e apply our indigenous knowledge to conserve our fields because official approaches are only good for the commercial farmers and could also be useful in the developed countries but not in our subsistence type of farming. In any case, we apply official approaches in official conservation projects especially when we are paid to do such work* (Direct communication with local communities). The above comment does not represent the view of commercial farmers, but that of the subsistence farmers about the commercial farming method land users are introduced to.

Further on this issue, the local communities’ position agrees with what Kothari, Anuradha & Palthak (1998), Muthama (1990), and Pimbert & Pretty (1998) wrote concerning the impact of transferred western conservation approaches to developing countries, when they noted that only few land users have adopted the specialists’ range of technical solutions. This viewpoint happens to be one of the issues that were consistently re-echoed by different groups and at different points in these discussions. Participants re-

emphasised that some of the local community members had successfully managed their degraded fields without government officers: *[S]ome of us can do it better than government officers. So, we expect officers to also learn how we have been managing our fields. We have the know-how, the strength and labour but finance is what we require from government to conserve our degraded fields.* (Direct communication with local communities).

Participants in the discussions went on to say that they had also learnt to neglect official approaches even after listening to government officers at workshops and “pitsos”. They further argued that land resources are continually degraded not because local communities lack the knowledge to conserve, but because government officers have failed to support local communities’ indigenous knowledge. A similar situation where local communities neglect official approaches prompted Abrol & Sehgal (1994) and Muthama (1990) to remark that some farmers do not comply with most official land resources conservation measures (see Chapter Two section 4.4 Chapter Three section 4.1 and Chapter Four section 3.13). Local communities at this point of the discussion called for government officers’ complementary technical and financial support for local conservation activities rather than their complete disregard for indigenous conservation knowledge.

Conservation officers deny the position of the local communities in this regard and reaffirm officers’ support and respect for local knowledge, adding that they have always married official measures with the local except for some extreme cases of severe land degradation where they had no other options than to resort to structural and mechanical measures. The above positions of both local communities and government officers notwithstanding, the truth remains that all of the government’s conservation projects come with different modern approaches showing little or no consideration for traditional measures. Some officers of the Ministry of Agriculture, emphasise that the extent of land degradation in Lesotho cannot be effectively addressed through local knowledge alone. These officers add that local communities need officers’ expertise, material, finance and management interventions to manage and conserve land resources well.

Yet, on the same issue, some of the officers politely but firmly argued that if local knowledge had not actually failed to address the extent of land degradation problems in their local communities, officers would not even have thought of modern alternatives and, further, that land wouldn't have degraded beyond local communities' control capacity. This officer's position also resonates with that of Rozanov (1994), when he argues that traditional technologies on land resources conservation were good and appropriate a hundred years ago, but, not at this time of unprecedented rate of land degradation. Rozanov's view implies that local knowledge and capacity require complementary intervention.

From studies discussed in Chapters Three and Four, one finds that the justification for every new land resources conservation project can be traced mainly to the failure of local communities either to conserve or sustain conservation projects. This study will make it clear that, despite the claim against local communities' ability to sustain conservation projects, not much has been done to either re-invigorate or reinforce the lapse observed amongst local communities by any of the past or on-going conservation projects. This is why in Chapter One section 1, 1.2, Cock & Fig (2000), FAO (1999), Ghimire (1994) and UNEP (2000) stressed the important roles of grassroots initiatives in land resources management in the developing nations, emphasising that community involvement should be one of the irrevocable principles of sustaining conservation initiatives. These writers further stress that real local involvement will also ensure good practices, which have always been lacking in the conventional approaches.

2.10 The roles of government agencies towards land resources conservation

To enable local communities to carry out land resources conservation activities, participants have suggested that adequate funding both of government and local community-initiated conservation projects should include that which provides for incentives such as food and/or cash-for-work. Other roles suggested for government agencies include the consistency and continuity of extension workers and the involvement of local communities in the planning stages of every conservation projects.

Participants have further suggested that the above suggestions will enable government agencies to determine what local communities' conservation priorities are. It therefore becomes important to recall that this is why Anna (1991), Bhatt (1998), EMPR (2000), Ghimire (1994), MoA (1998) and Pelser & Kherehloa (2000), attributed failures of conservation projects to unsustainable incentives, inadequate funding, contradictory approaches, and the politically motivated selection of conservation project participants. It should also be observed that the latter role of local communities has been re-echoed in several instances in this discussion. This suggests how crucial it is to the success of the practice of community-based conservation. In this vein, Bhatt (1998) observes that conservation projects which have included local communities, have always succeeded and have also been sustained. However, some of the roles outlined by local communities contradict the principles of community-based conservation. This serves to confirm that some local communities still want to be spoon-fed by government conservation agencies. Local communities that wanted government agencies to solely carry out all conservation responsibilities failed to mention the facilitative role of government agencies. The roles, which the local communities expected of government also run counter to the views of Blum (1997), Botes & Van Rensburg (2000), O'Riordan (1995), Preston-Whyte (1996), and UNEP (2000) about government agencies, expected roles in land resources conservation activities.

On the other hand, conservation officers outlined the following roles for local communities, which include:

- Informing government agencies of their conservation priority needs
- Taking the lead in conservation activities
- Continuing to sustain conservation projects as soon as the official duration of such projects end
- Carrying out monitoring exercises during conservation project implementation
- Providing labour services to support governments' conservation programmes.

2.11 Joint management of land resources conservation between government agencies and local communities

This study also examines the possibility of the joint management of land resources conservation between government agencies and local communities. In the process, local communities strongly upheld that they could effectively work jointly with the government officers but on condition that they be involved through out the various stages of conservation projects. Participants noted that this would avoid the conservation practice where local communities are told what to do and how to go about it. Participants also rejected the idea of employing an individual approach such as using the chief as a viable means of involving the entire local community. According to participants, going through the chief is a necessary step towards mobilising local communities, but they stressed that involving the entire local community is the surest means of community participation rather than using a chief and/or a few other individual elites and gate keepers. In line with these remarks, Anna (1991) in Chapter Three section 3, stresses that local communities are viewed as part of the problem rather than part of a potential conservation solution. Reference has also been made in Chapter Three section 5.14 that Cock & Fig (2000), Dladla (1998) and Mohammed (2001), having studied various joint management attempts in conservation programmes, noted that the bureaucratic administrative cumbersomeness to which local communities have been exposed by conventional approaches may remain a threat in the new system. Therefore, for an effective joint management approach, these writers further recommend that informal personal relationship should be encouraged so as to allow for the type of flexibility that could permit efficiency, acceptable standards and other good practices in the joint venture. Joint management practices in Lesotho have often been one-sided affairs. A change in roles and responsibilities of both the primary and the secondary stakeholders would ensure conflict-free cooperation.

2.12 Main stumbling blocks to local communities' participation in land resources conservation programmes

When asked to identify the stumbling blocks to local communities' participation, participants enumerated the following:

- Inadequate incentives from land resources conservation agencies was a major stumbling block.
- Lack of ownership, and right access to land due to the prevailing land tenure systems in Lesotho is a stumbling block to local communities' participation.
- Contradictory land resources conservation measures, to which extension workers of the various government agencies expose land users, was again noted as a hindrance to local communities' participation.
- Selective participation approach adopted by some conservation agencies. This, according to local communities, neglects most of the local community members' interests.
- Inadequate involvement of local communities during project identification and decision-making levels was re-echoed.
- Local communities' priority conservation projects are not often considered for implementation but official conservation priority projects are.
- Poverty was also pointed out as one of the stumbling blocks to local communities participating in land resources conservation activities.
- Local communities expressed their disappointment at government agencies' negation of the local communities' development structures and authorities such as village development committees and chiefs in favour of local politicians and sometimes the elite for the implementation of conservation programmes.
- Local communities expect some immediate benefits from conservation activities. The long-term nature of benefits derivable from conservation projects also accounts for why some local community members do not participate.
- The political affiliation of community members also acts as stumbling block because it affects the level of local community participation in land resources conservation

activities. The explanation is that only those whose political party is in office show only interest in both government agencies' and local communities' conservation activities.

- Government's past-unfulfilled promises to local communities also act as a stumbling block. Participants reported that: *[T]he reasons for failure of many past government conservation projects influence their attitude negatively towards participating in conservation activities.* (Direct communication with local communities).

Other stumbling blocks identified by the local communities include:

- The past practices of food and cash incentives for conservation work. Conservation projects that do not offer these types of incentives find it difficult to attract a high level of local community participation in Lesotho.
- The low numbers of exemplary pilot projects in place for demonstration of conservation activities and/or educating the local communities about the need to get involved are inadequate and this is a hindrance to local community participation.
- The advanced extent of land degradation in some local communities, which is beyond local capacity to rehabilitate without governments' leading supportive roles, have been a stumbling block.
- Lack of adequate funding to the satisfaction of local communities that desire to be put on permanent salaries and where possible, on pension benefits for participating in conservation activities are some of the major stumbling blocks.

Yet, even if this does come from government officers, it sounds unrealistic. The opinion does, however, articulate local communities' true expectations.

Past experiences have proved that some of the stumbling blocks pointed out by the study communities have been witnessed elsewhere, particularly within and beyond Lesotho. Examples are the Leribe Pilot Project of 1973-77 which failed because it was elitist. Moreover, Lesotho local communities that participated in the Woodlots Project never received the 20% share of the profit which was promised by the government (MoA, 1998), (see also Chapter Four, section 3, 3.6). In support to some of the stumbling blocks

outlined by the local communities, Abrol & Sehgal (1994) observe that small farmers are only interested in improving the production of their food grains for income and are not worried about the long-term sustainability. Anna (1991) also observes that land users have not been adequately involved in the planning and decision-making of conservation activities. Anna further reaffirms that attempts to compel local communities to participate in the management of conservation activities only at the level of implementation have often come to an abrupt end. It is in the light of the above that Adams & Hulme (1998), Bhatt (1998), Borocho (1998), Nihal (1997), Stocking & Garlard (1998), UNEP (2000), and Whiteside (1998) advocated for community participation in conservation programmes. (see Chapter One, section 1.1 and Chapter Three, section 3).

2.13 Ways of ensuring real community involvement in land resources conservation activities

On this issue, both government officers and local communities agreed that real community involvement could be ensured by the following measures:

- Focus on local community conservation priorities rather than officers' priorities.
- Insist on involving the local communities from the beginning of any conservation project through to the end.
- Build on local conservation knowledge and experiences.
- Build on motivating local communities with sustainable incentives instead of the usual 'food-for-work and cash incentives'.
- Build on educating and training local communities as well as exposing the people to both the short and the long-term benefits of conservation work.
- Concentrate on practicable and affordable conservation projects.
- Involve members from all segments of the community rather than a few, unrepresentative, selected individuals.
- Provide alternative sources of income for the local communities to alleviate that poverty which affects their level of participation.
- Include women and children in the management of conservation activities.
- Build on governments' facilitative roles.

- Build on the existing local development structures and authorities (village development committees and chiefs) instead of using few gatekeepers, local elite and politicians.
- Build on involving all stakeholders in any conservation work.
- Build on adequate sharing of conservation benefits amongst all stakeholders.
- Build on the revision of the present Lesotho “Lerotholi Land Law”⁵ and ensure fair distribution of arable lands amongst community members.
- Ensure that the extension workers serving in a particular community are consistent for a much longer period of time than has hitherto been the case.
- Extension workers of various conservation agencies operating simultaneously in a particular community should ensure that they reconcile their conservation approaches and measures before actually reaching out to the people.

The above suggestions notwithstanding, it must however be noted that both officers and local communities differ in respect of the ways and means of ensuring true community involvement. Some of the suggestions where they differ are related to incentives, sharing of benefits, as well as to using the existing development structures. Local communities advocated for cash payment for-work and the use of the existing local development structures, but the officers frowned upon their exclusive usage. Officers rather insisted on remaining flexible. Meanwhile, in support of the ways and means of ensuring real community involvement outlined by participants, Darkoh & Hjort-of-Ornas (1996), Kothari, Anuradha & Palthak (1998), Mathuma (1990) and Pelsler & Kherehloa (2000) agreed with intensifying efforts towards public awareness and with providing training materials to all segments of local communities.

Having presented the views expressed mainly by the local communities, the next section presents the opinions of conservation officers of the Ministry of Agriculture, and the Environmental Management for Poverty Reduction Project staff in Lesotho.

⁵ Lerotholi Land Law consists in part of codified customary laws and in part of regulations made in Lesotho to guide the country's land tenure system.

3. OPINIONS OF CONSERVATION AGENCIES ABOUT THE IMPLEMENTATION OF LAND RESOURCES CONSERVATION PROGRAMMES

The conservation agencies referred to here are the Ministry of Agriculture, and Environmental Management for Poverty Reduction (EMPR) Project, Lesotho. Opinions expressed by these agencies concerning the implementation of land resources conservation programmes are presented in the next section.

3.1 Problems associated with involving local communities in land resources conservation activities

While responding to this issue raised, conservation officers expressed their difficulties in convincing local communities about the application of modern conservation measures, adding that the conflicts between indigenous and modern knowledge and approaches to conservation programmes remain major problems. Officers continued to say that local communities often claim to be hungry and poor and that to them these are good reasons not to participate freely yet to demand food or cash as payment for any conservation work: *[U]nless there is a strong promise of providing food or cash payment, a local community is deserted on any day scheduled for communal meeting or conservation work. However, with the promise of providing food and or cash payment, you are sure to find even those under age and the aged people participating. Our field visits seem to irritate some of the land users who do not want to comply with some of the modern conservation approaches, but we keep approaching and talking to the people because it is our responsibility.* (Direct communication with government officers).

The problems of land ownership, which do not give individuals right of access other than the degraded lands allocated to interested individuals, are still unresolved. The favouritism exhibited by the land allocation committees and how this affects extension activities in local communities also received emphasis. Officers stressed that mobilising

local communities to participate in land resource conservation has not been an easy task. It must be mentioned that it is for the above reasons that the Ministry of Agriculture has resolved to assist only interested land users who have requested assistance. This approach appears individualistic, but can also attract individual members of any local community to embrace conservation work.

3.2 Lesotho environmental policies that could be enforced to ensure effective community-based conservation programmes

On these relevant policy issues conservation officers made strong cases for the amendment of the existing Lesotho “Lerotholi Land Law” so as to ensure fair distribution of the scarce arable lands to Lesotho community members without any kind of discrimination. Other important policy issues raised include:

- Gender-based discrimination and lack of enforcement of the sections of Lesotho Lerotholi Land Law that empowers the land allocation committees to revoke the allocated lands that are left uncultivated or undeveloped for more than two years. According to the conservation officers, erosion of land starts mainly from the abandoned lands. If the sections of the laws referred to above are enforced, lands will not be left to degrade. They added: *[I]f only these portions are enforced, the level at which local communities participate in conservation activities will certainly be improved.* They went to say that *where the greater majority of women in the rural communities cannot take decisions about the usage of their family’s lands until the husbands returned home at the end of every month from the South African mines. This system is not progressive* (Direct communication with government officers).

These men (husbands) visit for two days a month *“This is a short period to attend to all family matters”*, officers remarked. Officers therefore called for empowerment of women to enable them participate in decision-making regarding the management of family lands. This strong view of the conservation officers agrees with the strong views expressed by FAO (1999), Fleishers (1996) and Pelser & Khrehloa (2000) and followed up recommendations for empowering women as well as being gender sensitive. (see Chapters Two, section 5.6 and Chapter Three, section 8.2).

- Conservation officers also remarked that a fragile environment such as that of Lesotho without strict guiding environmental laws is good neither for the present nor the future of the country. Officers seriously advised that an environmental bill should not only be proposed and passed into law, but should be urgently enforced. However, Environmental Impact Assessment (EIA) officers at the National Environment Secretariat confirmed that a few individual developers within the city of Maseru (capital city of Lesotho) are already submitting project briefs of relevant projects before commencing development activities.
- Officers pointed out that the process of securing ‘titles’ to land has remained cumbersome for local community members particularly those who reside in the remote communities of the country (Lesotho). This needs to be liberalised and possibly decentralised so that people can be more interested in acquiring the gullied and other degraded lands for rehabilitation, thereby making a reasonable impact on conservation.

3.3 Implications of the divergent and contradictory conservation measures employed by conservation agencies

Conservation officers frowned upon the contradictory measures employed by conservation agencies. They agreed that such contradictory measures have considerable negative impacts on the level of local communities’ participation. They also agreed that the contradictory conservation measures which local communities learn from different projects field workers, have always confronted them. These officers state: *[W]e have no other answer to this regular confrontation than to request community members to adopt the measures best for them and possibly, the latest conservation measures. According to the officers at the Ministry of Agriculture’s conservation division, it is the conservation division’s responsibility to set standards for all conservation agencies in Lesotho. All conservation projects are supposed to be implemented with close monitoring and supervision of the conservation division of the Ministry of Agriculture (Direct communication with government officers).*

It is acknowledged that several of the existing conservation projects have little or no control from the Ministry of Agriculture. Conservation officers also frowned upon the uncompromising attitude of the Environmental Management for Poverty Reduction (EMPR) projects staff for widening the contradictory measures. Environmental Management for Poverty Reduction field officers have accepted that their conservation measures are quite different from those of the Ministry of Agriculture and other conservation agencies. This however, was, blamed on the National Environment Secretariat (NES) for implementing conservation projects instead of playing its accredited role as a coordinating body.

3.4 How funding has affected community participation in land resources management and conservation activities

In response to this issue raised, officers expressed their gratitude to donor agencies for funding most of the past and on-going conservation programmes in Lesotho. Though it is acknowledged that the Lesotho government agencies have tried to raise funds from the Lesotho Highlands Development Project to support conservation activities; otherwise, Lesotho has a long history of dependency on donor agencies. While acknowledging the efforts of donor agencies, officers stressed: *[T]he only problem they are often confronted with, is to continue and to sustain conservation projects after the official duration had lapsed* (Direct communication with government officers). They further expressed their discouraging experiences at the manner in which the local communities expect government to carry out all land rehabilitation activities in their local communities alone: *[L]ocal communities would even ask the government to pay them for the time spent in attending local community meetings where the issues of land degradation problems were discussed. They stressed that this is a culture that has been introduced into the system which is now difficult to reverse* (Direct communication with government officers).

Though the officers expressed their readiness to discontinue the usual incentives of providing food-for-work and or cash payment, it should, however, be clearly stated that

some funding agencies in Lesotho are still busy offering the same type of incentives to attract local communities' participation in conservation programmes.

Meanwhile, the fact on the ground is that most of the local community members are not ready to participate unless they are provided such incentives. Currently, the problem facing conservation initiatives is that of securing continuous funding from agencies to sustain the provision of continuous food-for-work or cash incentives. The issue of incentive towards participation is crucial and remains a challenge to conservation programmes. This is so because it is a combination of deprivation and entitlement. This expression supports the view of Rozanov (1994), when he wrote that conservation activities cannot be sustained through local sources alone, as every developing nation requires substantial investment to tackle conservation problems, and that this can only be provided through international cooperation.

3.5 Local capacity to manage and conserve land resources

Perhaps the more important issue in terms of land resources management and conservation is capacity building in local communities. This study therefore examined local communities' capacity to practise community-based conservation programmes successfully. In this process, conservation officers noted that local communities have limitations to manage and conserve land resources. Officers observed that local communities have adequate labour resources to tackle the land degradation problem, but lacked the finances and expertise required to implement conservation programmes effectively. They also observed the inadequacies of the labour capacity of the local communities with concern when they said that: *[T]he present local capacity could not comfortably address the magnitude of land degradation in Lesotho* (Direct communication with government officers).

They expressed confidence in the governments' capacity to tackle the land degradation challenges. They were also unanimous in calling for local communities capacity building. The call to strengthen local capacity to enable the people to meet the challenges of land

resources conservation has also been echoed in Chapters One and Three by several conservationists including Muthama (1990), Porter & Clement (1998), and Yeld (1994). These writers also supported Rozanov (1994) view that land resources conservation requires substantial investment, which cannot be provided by local sources, but could be realisable through international cooperation.

3.6 How to ensure local communities' participation in land resources conservation programmes

Conservation officers expressed the difficulties in mobilising local communities to participate in land resources conservation. As mentioned earlier, the staff of the Ministry of Agriculture ascertained that the Ministry had resolved not to provide food and/or cash incentives, but to assist only interested individual land users with technical and material support. Conservation officers emphasised that they were bent on educating local communities to train and also to provide the people with sustainable incentives to ensure their continuous participation in conservation activities. On the part of the staff of the EMPR Project, income-generating activities have been incorporated into the project to ensure sustainability, and again, to attract the participation of more youths. In addition, certificates of participation in land rehabilitation are issued to participants at the end of one year and/or six months where youths are engaged in the project.

The resolution of the Ministry of Agriculture to educate the local communities about the benefits of land resources conservation is in compliance with the ideas of Abrol & Sehgal (1994) that, unless a farmer is convinced that land resources conservation activities will add to his production or in some other ways help him to make better use of his investment, efforts to conserve and to reduce land degradation are not his priority. Abrol & Sehgal (1994) also added that the impression that conservation work provides only temporary employment to the rural unemployed rather than developing cropland and raising its productivity has gone against the idea of conservation. The latter authors further added that if farmers are made to realise that the benefits of complying with land resources conservation measures are worth more than the cost of farm land space, the

farmers are likely to embrace conservation ideas, and comply with the necessary conservation measures.

3.7 The future of community-based land resources conservation

This study has tried to examine the future practice of community-based land resources conservation. Conservation officers in reaction to this main question, noted that the future of community-based land resources conservation would depend on many issues which include the following:

- The complete withdrawal of cash and food-for-work kind of incentives as means of motivating local communities to participate in conservation activities for more sustainable kinds of incentives. This means that the shift-in approach (not to provide either food or cash) partially adopted by the Ministry of Agriculture, as a means of achieving true community-based conservation, needs to be strongly upheld by all conservation agencies. The argument that the shift would amount to deprivation of entitlement has not been ignored by this official standpoint: there is a tendency to introduce alternative incentives that would benefit entire local communities rather than a few individuals.
- A change in attitude of local communities towards land resources conservation was suggested. It was pointed out that, if local communities are educated about the benefits of conservation through an awareness campaign, community-based conservation might be actualised. They further noted that: *[T]he time it would take extension workers to change people's attitude would also depend on their consistencies, efforts, demonstrations and pilot projects made available for exemplary learning purposes* (Direct communication with both local communities and government officers).
- Alternative sources of income generation need to be developed to enable local communities to reduce their level of poverty. The poverty alleviation schemes suggested include: investment in local cooperative societies and entrepreneurship programmes for local peoples' skills development, income generating programmes that should be aided by the government agencies and interest free

- loans and grants, which must be sustainable both in principle and in practice are all pointed by conservation officers.
- To catch the people young by introducing them to land resources early, the conservation officers also highlighted introducing conservation subjects into the school curriculum. This will give the young learners opportunities to learn about conservation from childhood and possibly grow with such knowledge. Conservation officers concluded that: *[R]eal community-based conservation programme cannot be achieved overnight and may be partially achieved, but this would require some high levels of awareness achievable through campaign efforts, consistency in conservation policies, adequate funding, local capacity building aided by technical and material support* (Direct communication with government officers).

The way forward proposed by the conservation officers echoes that of Fiallo & Jacobson (1995) who advocated that residents should be given environmental education, develop alternative economic incentives and set up social and ecological monitoring teams to facilitate community-based initiatives.

Having analysed the data gathered from both the local communities and conservation agencies, the study now proceeds to present valuable lessons being learned which should be considered at various levels of engagement.

4. LESSONS LEARNT

The lessons learnt from the discussions categorised above are discussed under different sub-sections, which include lessons that relate to local communities and those that relate to both local communities and the government agencies. Thereafter, the study highlights some potential weaknesses, strengths, opportunities and threats to community-based land resources management and conservation practices in the next section. The lessons learnt that relate particularly to local communities are presented first in this section, and these

are highlighted under sub-heading 4.1 to 4.6. Lessons that relate to both local communities and the government agencies are presented under sub-headings 4.7 to 4.14.

4.1 Effect of insufficient arable lands on local communities' participation in conservation programmes

Under the Lesotho Communal Land Tenure System, each adult is entitled to a piece of arable land. But, as a result of insufficient arable land for allocation to each and every adult or household, there are many adults without a piece of land. Some families, of necessity, are obliged to produce cereal foodstuffs and vegetables by cultivating wherever possible. As a result, many individual farmers currently cultivate on steep lands, which do not ensure sustainable farming methods. Allocation of land by the traditional authorities and the village development councils creates numerous problems. This is because the size of the land individuals own is closely related to individuals' social status in a community. An average household or individual possesses a relatively larger plot for vegetable gardening and fields of moderate sizes. Affluent households or individuals possess both larger vegetable plots and fields, whereas some of the poorest households in contrast, possess neither a vegetable garden nor a field. Thus, most breadwinners who do not have title to land survive as labourers by working for more affluent individuals or households. This situation in Lesotho confirms the view held by Barrow (1993) that the landless situation has put the landless majority at the mercy of the few landowners and chiefs who control land in much of most African countries. This apparently, has a negative effect on local community participation in the management and conservation of land resources activities. Because of lack of tenure security in Lesotho, a farmer needs security of tenure, and sometimes ownership rights to justify investments such as the construction of conservation structures and the planting of trees that may take more than 15 years to reach maturity. Without security and ownership rights, investing in long-term conservation measures is never a priority to land users.

4.2 Inappropriate land tenure system and its associated problems

Lesotho's traditional land tenure system is formally defined within the laws of Leretholi. The fundamental principle of traditional land tenure and administration is that land is inalienable and consequently belongs to the people as a whole. In Lesotho, the right to use land is however vested in the office of the King as a trustee on behalf of the nation. As mentioned earlier, the authority to allocate land to men who meet specific criteria is delegated to different grades of chiefs and village development committees/ councils. The principal issues, apart from favouritism and shortage of land already discussed earlier, that currently impinge on community participation include:

- **Revocation of land rights**

The chief can revoke lands allocated to individuals, where such persons withdraw their allegiance to the chief. More adversely, all private rights to the use of arable land lapse at the end of every growing season. This is done to allow for public grazing. The danger of uncertainty arising from the power of reallocation is viewed as a constraint to farmers investing time and money in conserving fields. In reality, some persons do not get back the same piece of land on which they farmed the previous farming season. This does definitely not enhance conservation.

- **Denial of women's rights to inherit and/ or be allocated land.**

Traditionally, women only have access to lands through their husbands. Such lands are lost if the woman is divorced from her husband. In some cases, such lands are reduced to a level commensurate to her needs should her spouse die. The denial of women's rights to lands has been identified as one of the major constraints to conservation. Ghai (1994), Jackson (1994), Joekes (1994), Kothari, Anuradha & Palthak (1998) and Whiteside (1999) have argued in the same vein, emphasising that the discriminatory practice may continue to impinge on local community participation in conservation activities if a fair principle of gender sensitivity is not applied.

- **Communal ownership**

Communally- owned land provides little incentive for individuals to practise restraint in land use. The notion of “*everybody’s property is nobody’s property*” is recklessly exhibited in land resources use and even in conservation work in the areas of study. These practices are also demonstrated by the ways in which individuals graze animals and harvest tender trees. These are done not only due to the communal ownership system but also the fact that no economic value is attached to land resources. Bromley (1994), Summers (1999) and UNEP (2002) also agree that the unsustainable use of land resources is the result of a lack of attached economic value. Because; unsustainable land use practices do not in any way encourage conservation, this study supports situations that would permit sustainable uses. This may be achieved through a modified communal ownership of land and that type of modification which will provide sustainable incentives to entire local communities for participation in conservation activities.

- **Lack of enforcement of Lerotholi Law**

Those aspects of the Lerotholi Law stipulating that arable land allocated to individuals can be revoked if such land is left uncultivated for more than two years and also that a man should not have more land than he strictly needs for subsistence needs, are not being enforced. If these laws are enforced, more lands can be released to the landless and this will enable the majority of local community members to become involved in land resource conservation activities. The reasons for not enforcing these laws are not clearly stated, but Bromley (1994), Du Toit (2001), Hitzhusen (1994), UNEP (2000), and Yeld (1997) agree that the reasons are connected with economic forces.

- **Ignorance of people about Lesotho’s land law modifications**

Beside other factors that hinder local communities from participating in conservation activities, the people are ignorant of some modifications already made in the land laws during the 1973 Land Administration Act and the 1979 Land Act. This is

because the chiefs and the village development committees have not been willing to share such information with the people. This is made possible because by far the most of the rural dwellers do not have the opportunities to access such information, the legislation being produced in the English language without a Sesotho version.

To sum up this matter therefore, one could say that in practice, the Lesotho land tenure system provides but little incentive to the individual to improve or protect communally-owned land that is not fairly and adequately distributed amongst the people.

4.3 Conservation Laws

One of the reasons why conservation efforts in Lesotho are often not maintained is because adequate legal structures and regulatory bodies do not exist and even where they do, they are not always enforced. For instance, the Environmental Impact Assessment Bill, which has not been passed successfully into Environmental Act since 1997 is a good example. This explains the level of seriousness Government assigns to the Bill that is mandatory for development projects that could impact negatively on land resources. As earlier mentioned, portions of relevant Lerotoli Land Laws, are also not being enforced. These could also have motivated the rural communities to participate in land resources conservation activities. However, it may be reasonable to say that, despite all odds that the country has some good intentions to conserve, but that the policy-making bodies are not moving with the times. This may be attributed to an act of ignorance or negligence and this could also be a matter of priority, which policy-making bodies have for conservation of land resources.

4.4 Population pressure arising from both natural increase and retrenchment of Lesotho citizens from South African mines

The current population pressure, poverty, food deficit and degradation of land resources in Lesotho have been on the increase. Poverty has been on the increase in the study areas and participants identified this as the major reason for the low level of participation in

land resources conservation activities. Poverty in most cases limits the ability of many persons to engage in conservation activities, which sometimes require the purchase of inputs. The extent of poverty in the study areas has been worsened by the current retrenchment of Lesotho citizens at the South African mines. Dependency on government for conservation activities, reflecting almost seventy years of direct government action which includes payment for community members' labour for participating in conservation activities, can be attributed to the poverty level of the people in the areas of study. To be specific, WHO & GoL (1995) reported that Lesotho citizen mine workers has drastically reduced despite the fact that the population of the country has increased over the years. (see Table 25 below).

Table 25: Lesotho citizens employed on South African mines, 1986-2001

Year	Total No of Basotho employed	Change over previous year in percentage
1986	121 450	-
1987	121 934	0.4
1988	124 781	2.3
1999	126 733	1.6
1990	125 733	-0.7
1991	122 188	-2.9
1992	119 596	2.1
1993	116 129	-2.9
1994	112 722	-2.9
1995	103 745	8.0
1996	101 237	-2.4
1997	95 913	-4.6
1998	80 445	-16.1
1999	68 827	-14.4
2000	64 907	-5.7
2001	61 412	-5.4

Source: GoL (2001)

The above shows a -16.1% rate of retrenchment between 1986 and 1996 and -39.3 % between 1996 and 2001. In short within 15 years the mineworkers component in Lesotho reduced by half (or 60 000 male adults). Again, as highlighted earlier, the implication of the above rate of returnees of Lesotho citizens from the on-going retrenchment in the South Africa gold and diamond mines to the Lesotho scarce arable lands has consequences for the sustainability of land resources. This poses continuous threat to

conservation because not many alternatives are open to the returnees. Possibly, if there had been other alternatives, there could have been opportunities for the population to actually influence conservation activities.

4.5 Lack of economic value for land resources

As noted earlier, most local community members do not attach any economic value to land resources. This is confirmed in the way the people use these land resources and their lukewarm attitude towards conserving them. The people rather argue that many past attempts to correct land degradation and enhance conservation activities failed to recognise that there are usually economic reasons for such attempts. As earlier noted, the people again hinted that, unless their poverty level is improved, sustainable use of land resources may be impossible due to the lack of alternative means of livelihood. Local participants' reactions to question on user-fees also confirmed the carefree attitudes of the people, based on the reasoning that land resources are renewable and a free gift of nature. However, even though the issue of economic value of land resources is not the central focus of this study, this issue does merit further study, as it may reveal facts that could help CBC design strategies to encourage conservation behaviours amongst local communities.

4.6 Influence of the short-term benefits of conservation programmes

Most rural Lesotho citizens do not have a long-term concept of time regarding conservation of land resources. They tend to address present subsistence needs, rather than future potential long-term benefits of land resources conservation. As noted earlier, this is partly attributable to the poverty level of most of the people, the scarcity of arable land, and the lack of alternative means available to the people for survival. The total reliance on the scarce arable land makes it more difficult for the people to believe in and to accept the long-term concept of land resources conservation. This belief was confirmed when local participants repeatedly asked, *'How do we survive if we must wait for about fifteen years to allow a planted tree to mature for harvest?'*

Having presented the lessons that relate to local communities, lessons that relate to the work relationship of both local communities and government agencies are presented next.

4.7 Disregard of bottom-up approaches

Government conservation efforts experienced in Lesotho have demonstrated little concern about real community participation. This is because of the limited involvement of local communities in past conservation projects. However, every conservation project staff member involved in this study defended officers' efforts in trying to involve local communities from identification of conservation project to the implementation stages. The conservation extension officers who participated as one of the study research assistants witnessed instances where rural communities hesitated to participate in some of the study's focus group discussion sessions because, according to the people, *government officers often come to seek their feelings and never come back to them again with any feedback. They were not participating if they also only wanted to obtain their opinions only to disappear like others had done before* (Direct communication with local communities).

These feelings demonstrate the level of mistrust local communities have against government officers. Thus, some good principles must be introduced into the system, otherwise the work relationship between local communities and government officers may not be harmonised in the future.

4.8 Disbursements and distribution of conservation incentives

The manner in which disbursements of financial incentives are made to the persons who have participated in conservation activities has contributed to the failure of most conservation projects. From discussions with participants, it would appear that only a few of those who receive such incentives showed practical interest in conservation activities. According to participants, politicians take over projects that offer financial incentives and turn them into opportunities to compensate their party supporters. For instance, in 2001 the Lesotho Congress for Democracy (LCD) parliamentarians (the current ruling political party in Lesotho) took over the recruitment exercise of the youth in EMPR Project

because they wanted mostly party supporters to benefit from the monthly allowances of M100. The immediate consequence of this action was that the field officers lost control of the youths who then enjoyed all the privileges and the patronage of powerful parliamentarians. Indeed, allowances are compulsorily paid to the youths whether any work is actually done or not. Given the above, it is acceptable to reason that the principle of financial incentive does not corrupt a system but rather the ways such incentives are managed. In the past, there were cases where change of government has brought about the demolition of conservation structures and the cutting down of trees planted by the preceding regimes in Lesotho. The lesson must therefore be learnt that a selection of few party supporters should not be a yardstick for enlisting participants for land resources conservation work that offers financial incentives. No matter what the purpose of this choice of practice, the disadvantages far outnumber the advantages. However, no matter how the financial incentive is managed, Sondergaard (2000:254) supports this giving of financial incentive to local communities: *“[F]or poorer and more vulnerable sections of a local community to participate in land resources conservation, financial return for labour within a fairly limited period of time will be necessary, otherwise, they might have to withdraw from the project activities”*.

4.9 Neglect of local knowledge by government officers

Conservation officers acknowledged that originally land uses were based on local knowledge. Then, land users successfully practised sustainable types of farming through mixed-cropping of crops, which helped to enrich both crops and the land. As time went on, professionals moved the farmers away from this mixed-cropping type of farming by the introduction of chemical fertilisers as a better alternative. The chemical fertilisers introduced as the better alternative were found to enrich the crops without also enriching the land. The high cost of fertilisers, coupled with the rate of land degradation, caused professionals to start making moves to return to the initial local knowledge practise of a mixed-cropping system as a viable and sustainable option. This act of officers' inconsistency, and the assumption that officers have all the solutions, have dragged the rural populace in tow for decades and have also shrunk the motivation local communities

have towards participating in official conservation initiatives. Besides the practice of mixed-cropping, government officers also acknowledged the neglect of local knowledge in conservation practices. This principle of give-and-take between local communities and government officers which Isaac *et al.* (2000) also advocated for, could produce effective conservation results. Thus, both local and modern knowledge working complementarily will help in no small way to ensure the successful practice of community-based conservation.

4.10 Enhanced individual and group approaches

Government agencies and non-governmental agencies involved in conserving land resources in Lesotho through the Ministry of Agriculture are currently encouraging working with individual farmers, while the Environmental Management for Poverty Reduction (EMPR) project is carrying out conservation activities through youth groups. Those working with interested individuals in conservation activities have based their reasons on the primary assumption that there are individual farmers who are interested in improving their lands, while others do not view conservation as a priority. Those who advocate the individual approach opine that it is intended to bring conservation closer to land users. There are also those who view individual and group approaches as the initial steps towards achieving community-based practices. The advocates of the individual approach argue that local communities are likely to become interested in conservation work of a few community members and thereby become interested. However, individual and group approaches still contradict the principles of community-based practices because the group represents the group's interest, while an individual represents an individual's interest. In other words, the community-based approach is communal while individual and group approaches are either individual or group practises and not community-based.

4.11 Government agencies' conservation measures

The study participants, particularly the local communities attributed failures of conservation programmes to the inappropriate and unacceptable conservation measures

employed by government agencies. These are measures which local communities are often compelled to practise without considering either the Lesotho physical environment as well or the social and the economic context of Lesotho agricultural practices. The importation of practices not suitable to the circumstances of Lesotho has not yielded dividends. Then, too, conservation efforts in Lesotho may continue to be fruitless if only local measures are employed.

4.12 Lack of co-ordination of government agencies conservation activities

It has also been established that some of the problems that Lesotho has encountered in managing land resources conservation programmes over the past decades are partly due to a lack of co-ordination of efforts of the various conservation agencies. Some Lesotho communities have been in conflicts with the government agencies as a result of the contradictory and divergent conservation measures, which these agencies tried unsuccessfully to make local communities practise. For instance, the Ministry of Agriculture, Lesotho, and the Environmental Management for Poverty Reduction Project and the rural communities have different ways and approaches of building conservation structures along gullies. Instead of a unified model, officers criticised each other's structures in the field in the presence of the local beneficiaries. Collaboration and co-ordination are therefore lacking in the implementation of conservation programmes. The demonstrations of lack of co-ordinated efforts have remained an impediment to effective management of land resources conservation in Lesotho. As noted earlier, this is because the Conservation Division of the Ministry of Agriculture, whose responsibility it is to set standards, is not co-opted into some of the conservation projects. From the interviews granted to officers of conservation agencies it became clear that this apparent lack of co-ordination has not been checked because, the National Environment Secretariat (NES), which ought to be a co-ordinating body, is currently hosting implementing agencies. Again, it has become apparent that this lack of co-ordination has accounted for a good deal of community apathy towards conservation efforts in Lesotho. In an organised atmosphere, the approaches and time frame ought to be unified before reaching out to the rural communities, instead of the on-going confusion which conservation officers still

perpetuate. This poor practice will not help in anyway to encourage the local communities towards taking over conservation roles and responsibilities.

4.13 False claims of conservation projects success

It has also been observed in Lesotho that many conservation projects have made reasonable improvements on the landscape. On the whole, most of the conservation endeavours claim successes and raise high hopes for sustainability in their project evaluation reports. One of the lessons learnt is that government conservation project successes are far outnumbered by failures. Local communities have been embarrassed by the false claims of government agencies' conservation projects. In this situation, nobody will be ready to put in much effort to be rewarded. The important lesson to learn here is that officers do this to satisfy donors and not the beneficiaries, who in most cases do not have access to conservation project reports. Therefore, unless evaluation teams are able to talk freely to project beneficiaries and hand over copies of evaluation reports to the people for comments, the chances of sincere and frank project evaluation may become a mirage and this may continue to be a hindrance to local community participation in conservation initiatives.

4.14 Other lessons learnt

- The low priority accorded land resources conservation by the local people relative to other needs is also seriously hampering conservation. Most Lesotho rural community members believe that conservation of land resources is purely the responsibility of government agencies and that they should only share in the benefits arising from conservation efforts.
- The act of remunerating people for conservation work has often discouraged most people not enlisted for remuneration. Participants stressed that: *people who are paid monthly for conservation work should do all the conservation work in their various communities* (Direct communication with local communities). This view is firmly held by most local community members who are not beneficiaries of this incentive.
- Lesotho local communities do not have everything that is required to conserve land

resources. However, they are able to provide the labour, but without much financial and material capability. It is also noted that their low purchasing power and little local knowledge decidedly require complementary adequate funding and professional expertise to cope with the magnitude of land degradation in the study areas.

- Local communities lack adequate information about land resources conservation. Access to information, assistance and processes of securing such assistance have been major impediments to local communities' embarking on conservation projects.
- The latest research information in the area of land resources conservation in Lesotho is the outcome of research carried out in 1988 by Professor Q.K.Chakela. Embarrassingly, the absolute lack of valid and current information cut across relevant government departments. I must acknowledge that the Rangeland Management department appears to be worst hit by lack of information and this could be because relevant international organisations have not shown interest in the area for the past one-decade. A situation where the department can only account (without certainty) for about 12 percent of the total rangelands in Lesotho negates the much talk about sustainable conservation of land resources.
- Another lesson is that herd-boys and livestock keepers often graze their animals at night. This is the time they graze their animals in unauthorized land areas, thereby degrading protected areas.
- Mistakes of past conservation projects are still being repeated by the on-going projects in that they encourage, poor practices that do not enhance community-based approaches.

The lessons learnt that relate to local communities and conservation agencies having been presented, the following section outlines some potential weaknesses, strengths, opportunities and threats identified in the present conventional approaches to conservation programmes.

5. POTENTIAL WEAKNESSES, STRENGTHS, OPPORTUNITIES AND THREATS TO COMMUNITY-BASED CONSERVATION PROGRAMMES

This section is considered important because it sums up the weaknesses, strengths and opportunities which community-based conservation approaches offer. It also highlights the likely threats to the practice. Above all, the knowledge of the above will help to guard against possible challenges while employing the good practices of community-based conservation. The potential weaknesses through to the threats to community-based conservation programmes are presented in sub-headings 5.1 to 5.4 as shown below.

5.1 Weaknesses

The weaknesses in the proposed community-based system include:

- Food-for-work and or cash payment incentives offered to local community members for participating in conservation activities are not in tune with the principle of community-based approaches.
- Ignorance of the rural dwellers about the long-term benefits of land resources conservation activities may continue to hamper further attempts to sustain conservation programmes.
- There is a lack of adequate capacity among local communities to conserve land resources.
- The denial to women of access to land and to the power of decision-making-in the absence of their labour-migrant husbands-is a major cultural weakness in the system.
- Continuous reliance on government agencies for land resources conservation is an attitude that has contributed to the abandonment of conservation projects in the study areas. This means that for now, the people lack the attitude of self-reliance.
- The non-involvement of children in land resources conservation activities has also been identified as a weakness. This is because children are the leaders of tomorrow and should not be overlooked in the process of conservation.
- Unfavourable weather in Lesotho, which has affected the survival of planted trees, grasses, landscape and accelerated desertification in the area, is a natural weakness.

- Overstocking of livestock and the associated uncontrolled grazing has weakened several attempts to conserve land resources. This may remain a threat unless it is tactically checked.
- Lack of environmental laws and regulations in Lesotho is a legal and constitutional weakness of the highest order.
- Contradictory conservation measures employed by government agencies have featured prominently as a weakness.
- The poor communication between government and local communities, which has sustained conflict arising from conservation attempts, is also a weakness.
- Local communities' short-term attitude towards conservation is another major weakness to the practice of a community-based conservation programme.
- Lack of clear policies and guidelines for involving local communities in conservation of land resources is also a weakness.
- The lack of relevant skills amongst government agencies has perpetuated the lack of professionalism in conservation practices.

5.2 Strengths

The strengths in the system include:

- Local knowledge about land resources conservation can be built on.
- Available labour resources within local communities can complement the funding, material and expertise supportive roles of government agencies.
- Enthusiasm amongst donors to help communities conserve land resources is an encouraging strength and should be utilised by local communities.
- The availability of committed extension workers who are readily available to serve in every nook and cranny of Lesotho, is also a strength.
- Government's interest in and commitment to the conservation of land resources is a strength to build on so as to actualise community-based conservation practice.
- Existence of several NGOs interested in the conservation of land resources is another strength that needs to be explored.
- The on-going revision of Lerotholi Land Law, which is reconsidering restrictions

based on gender ownership of land, is an encouraging development.

- Local communities do have energy and they can be dynamic when they want to. This energy and dynamic nature of the people can also be explored.
- The culture of group work in Lesotho local communities can help to strengthen the joint management approach rather than the individual and group approaches, which are slower means of achieving community-based conservation practices.
- The existing local communities development structures such as the VDCs can be strengthened and used to carry out all community-based conservation initiatives.
- Lesotho local communities' willingness to jointly conserve land resources with government is also another strength that can be built upon to actualise community-based conservation practices.

5.3 Opportunities

The opportunities the system provide include:

- Local/District governments' support for land resources conservation is an opportunity for community-based approach to harness.
- Educational institutions' interest in participating at different levels in the form of research, outreach and personnel inputs-offers great opportunities for community-based conservation practices.
- Being able also to learn also from some current experiences is yet another opportunity offered by the proposed shift to community-based conservation practice.
- The encouragement given to all local communities to champion community-based conservation initiatives is an opportunity because it is the surest way of guaranteeing ownership and an adequate share of conservation benefits to local communities.
- The opportunity of learning from past conservation mistakes, which will ensure a successful shift from conventional to community-based approaches, is another opportunity.
- The opportunity of also learning from individual land users is another opportunity available to local communities. The initiatives of individuals can be transformed and developed into community-based conservation projects. However, this study does not

fully support individual and group conservation approaches.

- United Nations Volunteers Lesotho has mechanisms in motion to set up a Volunteers Centre particularly, in the areas of environmental management and land resources conservation. The proposed centres will provide opportunities which can attract support assistance from external bodies. Such opportunities can be harnessed to strengthen community-based conservation practices.

5.4 Potential threats

Some conservationists consider community-based conservation programmes to be the best conservation option. Others are skeptical about local communities' capabilities to practice community-based conservation successfully without government interventions, except for small-scale conservation projects. However, experience has shown that the magnitude of the conservation project notwithstanding the practice of community-based conservation in Lesotho is faced with potential threats which include the following:

- Potential threats to the good practices are the uncertain capacity of the available land to improve the local economy, and the fear that local communities will not be patient enough to reap the long-term benefits expected from conservation work.
- Another threat is the uncertain capacity of local communities to provide sufficient funding and expertise to cope with conservation responsibilities.
- Internal conflict between different factions within conservation community was a regular feature of past conservation activities. The likelihood that this may continue is a threat.
- The harsh winters and frequent snowfalls which hamper the growth of vegetative cover and planted trees and grasses may continue to frustrate the conservation initiatives of local communities.
- Trampling caused by uncontrolled livestock on rehabilitated lands can hardly be controlled without strict livestock laws that would affect the survival of local community members.
- The hungry attitude of the people for land may affect their commitment to conservation activities. This is because the available arable land in the country is not

adequate for every household.

- Interference by extension workers in matters that ought to be the sole concern and responsibility of local communities is a potential threat to CBC.
- Local community members trained for a particular land resources conservation project may move out of their immediate local communities and be lost to unrelated organisations. This will mean a loss to such a community and to the project. This kind of loss can affect the sustainability of any conservation project.
- An inappropriate land tenure system, which restricts women's participation in conservation activities, can continue to affect community-based conservation initiatives.
- Polarisation of conservation agencies and a lack of national coordination of conservation activities are also potential threats because conservation projects come with different designs and sometimes with contradictory measures that discourage local communities from participating actively.

6. CONCLUSION

The implementation of government and local communities initiated land resources conservation programmes and the possible practice of community-based approaches have been discussed with both local communities and government officers. The data analysis expresses their ideas, views and opinions of both the local communities and the government officers. The following facts, which address the study objectives and research questions, have been deduced.

It is apparent from the analysis that community participation in the management and conservation of land resources in Lesotho has been low. This low level of community participation has been attributed to both the existing conservation measures and the management processes. Local participants acknowledged that local communities have a very poor knowledge of modern conservation measures. The study portrays a complex picture of community-based conservation practices. It has been established that those

people who have an average economic status tend to get more readily involved in conservation activities than those with a relatively better economic situation. The study confirms that local communities do not have the required capacities to practice community-based land resources conservation successfully. The landless group express a desire to get involved if they are allocated lands and provided with economic incentives. This again supports the principle of equity in land distribution practices among local communities and also provision of sustainable incentives. In a way, this acknowledges the fact that cash incentives alone will be insufficient to entrench community-based conservation practices. It has also been established that community members who often participate in conservation activities are mainly those privileged people who have been trained by different government conservation projects. These are selected participants who have often benefited from government conservation agencies in the study areas. This means that not much has been done toward, actually empowering local communities to take over the management of conservation initiatives.

The magnitude of land degradation in Lesotho is a threat because of the low level of local resources available for conservation tasks. However, the provision of labour and other conservation services such as becoming involved in the planning, monitoring and evaluation stages, and the ability to sustain conservation initiatives, are valuable services which local communities could provide without actually conceding their rights of ownership and benefits to any external agencies. Funding, machineries and materials and where necessary, technical expertise-may continue to be expected of government and other funding agencies until the local communities are adequately empowered and capacitated to be self-dependent. Concentrating conservation activities on a few individual local community members who do not own land, cannot ensure sustainability of conservation efforts. Such attempts will do more harm than good and may further amount to encouraging poor practices rather than community-based approaches.

The opinions expressed by participants gave some clear insight as to why there have been increased numbers of abandoned conservation projects amid deepening and escalating

land degradation in Lesotho. Such insights range from inadequate incentives to lack of ownership and access to land resources, the long-term nature of conservation projects, contradictory conservation measures, selective participation and the neglect of indigenous knowledge and technologies. Yet others include poverty, political affiliations, disregard for community leadership structures, disregard for the reasons for the failure of past conservation initiatives, government top-down approaches, inappropriate land tenure systems, disregard for local community priority conservation needs and a lack of adequate funding for conservation initiatives.

The relationships between the local communities and government officers in the management of land resources have been soured with conflicts, ignominy and disregard of local communities arising from the existing poor practices. To some, relationships between government agencies and local communities in conservation work were mixed. To others, mobilising local communities to participate in conservation activities has been dependent on the type of incentives provided by any conservation project. Cash and food-for-work incentives have been made popular, especially as most conservation projects in Lesotho provide either of the two types of incentives as means of attracting participation. It has also been established that it will be difficult for local communities to continue to enjoy these types of incentive and still promote self-reliance as a means of sustaining conservation. This experience corroborates the work by Salafsky *et al.*, (1999), which opines that non-cash benefits associated with enterprise-based conservation strategies, infrastructure support, empowerment and improved environmental conditions, may be more useful than unsustainable cash benefits.

On the issue of conservation knowledge and its practical application: While the local communities rely strongly on indigenous knowledge and experiences, the government officers feel that the magnitude of land degradation in the study areas requires the use of modern technology backed with huge funding, which the local communities do not have the required capacities to provide. However, more rational participants in the discussions argue for a blend of both indigenous and modern technologies for the realisation of

community-based conservation practices, rather than the usual propagation of the superiority of modern approaches to those of indigenous knowledge and technologies. A good correlation of both modern and indigenous knowledge confirms the views of Barkham (1995) that the most effective way of ensuring sustainability of conservation initiatives is for ordinary people and government to work in partnership.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

1. INTRODUCTION

This concluding chapter provides guidelines for both the practice of community-based management and for the conservation of land resources programmes. The chapter is structured into four sections. The first section deals with suggestions and recommendations for capacity building of the local communities. The second section features the suggestions and recommendations in respect of redefining and redirecting governments' roles and responsibilities in respect of conservation, while the third section contains the suggested step-by-step participatory model for community-based conservation programmes focusing on land resources in general and for Lesotho, in particular. The fourth section recommends areas for future research.

2. SUGGESTIONS AND RECOMMENDATIONS FOR CAPACITY BUILDING OF LOCAL COMMUNITIES

Chapters Three, Four and Five of this study have provided adequate evidence that community-based conservation programmes have not been widely practised. It has also been demonstrated that many of the conservation efforts of various local communities in Lesotho and beyond have either been directed by external agencies or have had much external funding and investment. It was also indicated in these chapters that the high level of external interventions notwithstanding there was an expressed interest from both government agencies, and local communities in the good practices of community-based conservation.

Based on these findings, this study suggests the need for Lesotho to define her stake in the global efforts to conserve her land resources. However, whether local communities can effectively carry out the responsibilities that may be put on the people entirely due to the shift from the conventional to community-based approaches, may depend largely on the attention that the findings and recommendations that have emerged from this study receive from relevant government agencies, organisations, practitioners and local communities and research findings elsewhere in Africa and Asia. These recommendations are presented under sub-headings 2.1 to 2.10.

2.1 Build on community-centred conservation approaches

It has been established that individuals who have ideas about how best to utilise communally-owned land resources in rural communities are sometimes powerless to act on their own. This is the case because such action requires some social organisational and political powers, which are often lacking. Moreover, community management of land resources is essentially a community process. Therefore, a Community Conservation Forum (CCF) may be necessary, primarily to ensure that all stakeholders have the opportunity to participate openly and freely. In creating such a forum, it may be necessary to consider all local communities under one traditional and/or local administrative authority and also neighbouring communities that have an interest in the conservation of a particular environment. Therefore, approaches geared towards conservation of land resources have to be centred on local communities rather than individuals and unrepresented groups in the ways the MoA and EMPR are currently carrying out conservation activities in Lesotho.

2.2 Build on local communities' conservation priorities and definitions

Conservation officers have often projected official conservation priorities onto local communities. They have also overlooked the importance of local specific ways of meeting conservation needs. Therefore, the definition of what is to be conserved and how it should be managed and for whom, need to be determined during the planning stages by local communities who are the primary stakeholders. Community-based processes do not

only encourage local communities' participation, but also put local communities' conservation priorities at the forefront. To strengthen community-based systems, more participatory, local-level evaluation and priority identification methodologies are recommended instead of the conventional systems, which have not yielded many dividends.

2.3 Build on local communities' conservation institutions

Many conservation projects have been abandoned over the years, as was indicated in Chapters Three and Four. This is mainly the result of very little being achieved in terms of empowering local communities to sustain conservation projects. To empower local communities would require conservation agencies to capacitate local institutions with a view to enabling them to accelerate and sustain conservation projects. While capacitating local communities, indigenous conservation methods also need to be sustained, while modifications should be recommended where necessary. Above all, any outside interventions must be designed in such a way that at the end of any conservation project cycle, there are dependable local institutions and skills in place to sustain such conservation programmes.

2.4 Strengthen local rights, access and security of land resources

Chapters Three and Four have established instances proving that national governments have a long history of denying indigenous people and neighbouring local communities' rights over protected areas and the resources contained in them. This act of infringement on communities' rights is one of the most enduring sources of conflicts and violence between government officers and local communities. There are instances where local communities have modified and managed a particular protected area for decades. Yet, as soon as government interventions are made in respect of such protected areas, these communities are denied special rights of access, decision-making and control over such protected areas. Therefore, to strengthen local communities' control, security and access to such protected areas, a variety of legal arrangements need to be introduced by national governments to protect the interests of the local communities. However, this study does

not recommend that local communities should be allowed uncontrolled rights and unlimited access to land resources use.

2.5 Strengthen capacities of local communities to engage with government and non-governmental institutions

Lesotho is a poor country that cannot afford to conserve its land resources without external intervention. Poverty in Lesotho, in terms of its widespread prevalence and varied intensity, transcends all rural population segments. Therefore, there is an urgent need to strengthen local community capacity building for conservation of land resources. This will ensure that the available land yields the greatest sustainable benefits to the present generation and also meets the needs of future generations. Lesotho can only conserve its land resources by increasing the human capacity to care, protect and manage its land resources. The capacity building processes should transcend community-based organisations, women's groups, holders of traditional knowledge, youth groups and private individuals.

2.6 Internalise the economic value of land resources and conservation responsibilities within local communities

It has also been established that local communities have been denied opportunities to internalise the management of land resources, particularly in protected areas. Very often community members are seen as a threat to protected areas rather than partners in conservation. In taking charge of conservation responsibilities the cost, which includes patrolling through rotational watch, user-fees (UF), penalty systems and other management responsibilities, need to be in accordance with local communities' determined management measures. Recognition must also be accorded the socio-economic dynamics affecting that particular local community's livelihood. Also, to avoid the anticipated management problems involved in the user-fee system and to make it relevant to the local context, local communities should decide upon the amount of user-fees, and resources that may be included under the user-fee list. Local communities also need to be empowered to punish offenders of land resources-related matters including

outsiders who trespass.

2.7 Build on less capital-intensive conservation projects

It has been confirmed that many capital-intensive conservation projects in Lesotho cease when external financial support for such projects is terminated because local communities are not able to sustain capital-intensive conservation projects. Such conservation projects have as has been pointed out in Chapters Three and Four, discouraged local communities participation, as such projects are largely regarded as official conservation projects. It follows from the above that a conservation project which requires huge capital investment and continued financial support, should receive less attention, while community-based conservation needs should be prioritised. Thus, it is recommended that local communities embark on less capital-intensive conservation projects that require locally available technologies and resources.

2.8 Depart from inequitable sharing of conservation benefits

As noted in chapter Four, instances where local communities were denied conservation benefits were experienced in conservation programmes in Lesotho. It has also been acknowledged that a community-based conservation programme has little chance of success where benefits are not distributed equitably among stakeholders, particularly to local communities. Having established that various codes of conduct developed to ensure greater equity in benefit sharing have not been legally binding instruments, it is therefore recommended that wide-ranging reforms and restoration of benefit rights to local communities be enforced. Individual communities may also design formulas suitable for them to share conservation benefits. However, what is important, is that sharing of conservation benefits has to be equitably distributed particularly to the host local communities with regard to protected areas.

2.9 Build on equitable land tenure systems

In Lesotho the land tenure system remains a thorny issue. The existing tenure systems have been confirmed to contribute to land degradation (see Chapters Two and Five). This

is attributed to systems that do not fulfil the equitable distribution of land for which they were intended. This situation suggests an urgent need for revision of the existing land tenure systems. This suggestion is made to encourage local communities to participate more actively in conservation activities. As suggested in Chapter Five, community interest in conservation activities can be enhanced if elements such as favouritism, sex and status quo used as yardsticks for land distribution are removed.

2.10 Involve traditional healers in conservation activities

It is a fact well acknowledged that traditional healers in Lesotho are not seriously involved in conservation activities despite the fact that they utilise much of the land resources for their healing practices. Government agencies and NGOs involved in conservation activities therefore need to involve traditional healers in relevant conservation programmes, such as developing nurseries, making home gardens to grow medicinal plants as well as rear livestock. This is recommended with the intention that traditional healers will make a reasonable impact to sustain the numerous plants and livestock species which they terminate on daily basis for the purpose of healing people of different diseases.

The next section deals with recommendations in respect of redirecting and redefining Governments' roles and responsibilities in land resources conservation programmes.

3. REDIRECTING AND REDEFINING GOVERNMENT CONSERVATION ROLES AND RESPONSIBILITIES IN CONSERVATION PROGRAMMES

The entire study has confirmed the observation that national governments and conservation agencies have been playing dominant roles in conservation programmes in Lesotho and further a-field. However, this meant the exclusion of local communities at some crucial stages. A shift from a conventional to a community-based approach requires that the dominant roles of governments should henceforth be restricted to facilitative roles and responsibilities. To restrict governments' dominant roles and responsibilities,

and to redirect its level of interventions, the following recommendations under sub-headings 3.1 to 3.9 need to be considered as imperative.

3.1 Build on re-orientation of officers about community-based conservation processes

Despite campaigns for local communities' involvement in land resources conservation projects, it has remained difficult for Lesotho conservation officers and managers to relinquish control over key decisions on the design, management and monitoring, and evaluation of conservation projects. These officers, rather, take the centre stage of conservation initiatives and also manage them. If the objective of conservation of land resources is to achieve sustainability, then nothing less than the functional involvement of local communities in the process will suffice. In other words what is suggested is the use of participatory methodologies by all conservation agencies. It is therefore recommended that government officers are re-oriented towards good conservation practices.

3.2 Build on enduring patience and time

This study confirms the fact that local communities tend to address present subsistence needs rather than the long-term benefits of conservation work. Instead, they prefer to engage in economic activities that provide immediate returns. Changing local communities' attitudes about this would require a gradual process. Reasonable time needs to be invested to educate people about the long-term concept of conservation activities and the impact long-term concept makes on the environment and particularly, on land resources. It is further recommended that while going through this process, that other sources of income be provided to local communities, to help them to imbibe the long-term patience and time concepts of conservation activities.

3.3 Build on local systems of conservation and management knowledge

It has also been established that conservation officers have often brushed aside indigenous ways of valuing and organising conservation activities. Officers also claim that their official approaches are superior to the indigenous approaches of organising

conservation activities, despite the fact that conservation of land resources programmes need to be based on site-specific traditions, technologies and economies. This study, however, confirms that although conservation officers appreciate traditional measures, they often appear to be duty bound to apply official approaches recommended by the project designers. Since community-based approaches remain one of the surest means of conserving land resources, government officers need to appreciate local conservation practices and recognise these as valid measures and means of conservation.

3.4 Build on negotiating agreements with partners for joint conservation action

More often than not negotiated agreements between external and local community institutions on how best to manage conservation initiatives jointly, do not exist. Where such agreements have been made, strictly adherence by conservation agencies has been lacking. It has also been confirmed that indigenous people are not given the opportunity to democratically represent their communities in some conservation management teams. Rather, conservation agencies have preferred to choose persons of their choice to represent local communities. It has also been established in Lesotho, that selected interest groups often represent most local communities. Based on these experiences of unilateral agreements and decisions, it is recommended that the joint management practice between local communities and government and other conservation agencies be based on negotiated agreements and not on decisions taken unilaterally by conservation agencies.

3.5 Build on uniformity of conservation approaches amongst conservation agencies

This study identified that the contradictory approaches used by conservation agencies in Lesotho have been perpetuated by the lack of coordination of conservation activities amongst agencies. For instance, the National Environment Secretariat (NES) of Lesotho was blamed for neglecting its coordinative role. On the other hand, the conservation division of the Ministry of Agriculture of Lesotho was also blamed for not maintaining conservation standards for Lesotho as stipulated by the policy according to which the unit was established (see Chapter Five). To ensure uniformity and consistency of conservation approaches amongst conservation agencies, it is recommended that:

- The District Agriculture and Conservation Officers (DACOs) need to be incorporated into the national conservation programme coordination meetings of the capacity-building committee. This is recommended because DACOs officers maintain direct contacts with land resources users. It is also important to note that:
 - The DACOs have long-term experience and knowledge about past and on-going conservation activities at both the district and community levels.
 - DACOs have experience about conservation methods that have worked well and those that have failed in different local communities.
 - Some conservation service providers often recruit inexperienced conservation field officers and sometimes those persons without proper knowledge of the local communities they are meant to serve.
 - DACOs have relevant information about neglected communities, badly degraded areas; areas that require conservation attention and areas that have already been attended to by other conservation agencies. If DACOs are involved at the programme co-ordination committee level, new conservation initiatives will be built on past and on-going conservation activities at both the national and the local levels thereby ensuring uniformity of approaches and measures among conservation agencies.

3.6 Build on the use of multi-disciplinary extension workers/officers

This study also confirmed that conservation extension workers/officers serving with both MoA, EMPR and other conservation agencies, have hardly received any former training in extension services. They have received only generalist training in either Agricultural Sciences or pure sciences but, without any relevant specialisation in conservation. This presents difficulties for some conservation officers to respond to local communities' conservation services needs. It is therefore suggested that extension workers who previously had specialised in a particular field of extension will require multi-disciplinary training in conservation. Generalist knowledge will help extension workers, because such workers would have been trained to provide diverse and broad knowledge about good conservation practices. To equip conservation extension workers/officers for better

performance in conservation assignments, conservation videos, overhead transparencies, slide shows, pamphlets and relevant magazines need to be made available to such workers.

3.7 Build on the provision of multi-disciplinary conservation training manuals

In Lesotho, many available conservation manuals appear to be either too theoretical or too technical and therefore useful to experts and specialists within conservation disciplines. As suggested earlier, the extension systems in use should address a wide spectrum of land users' problems. With this in mind, it is recommended that training manuals and materials designed to broaden the profile of all conservation workers/officers need be provided so that conservation field staff can address the multi-disciplinary nature of conservation problems. The recommended manuals should be short, precise, straightforward, and pictorial in nature and should also carry practical messages. Such manuals should also be written in plain and understandable language to all categories of conservation extension workers and particularly to land users who may find it useful to read and learn from. It is also recommended that multi-disciplinary extension workers should be made responsible for preparing these types of training manuals.

3.8 Build on proper documentation of conservation activities

This study also established that conservation agencies often document successful conservation activities and do not record the failures, a practice that does not enhance conservation practices. This practice has been described as one of the reasons why conservation agencies often repeat without modification practices and measures that have failed previously within a community. Therefore, accurate, in-depth and sincere documentation of successes and failures of conservation activities is recommended to enhance good conservation practices in Lesotho and farther afield.

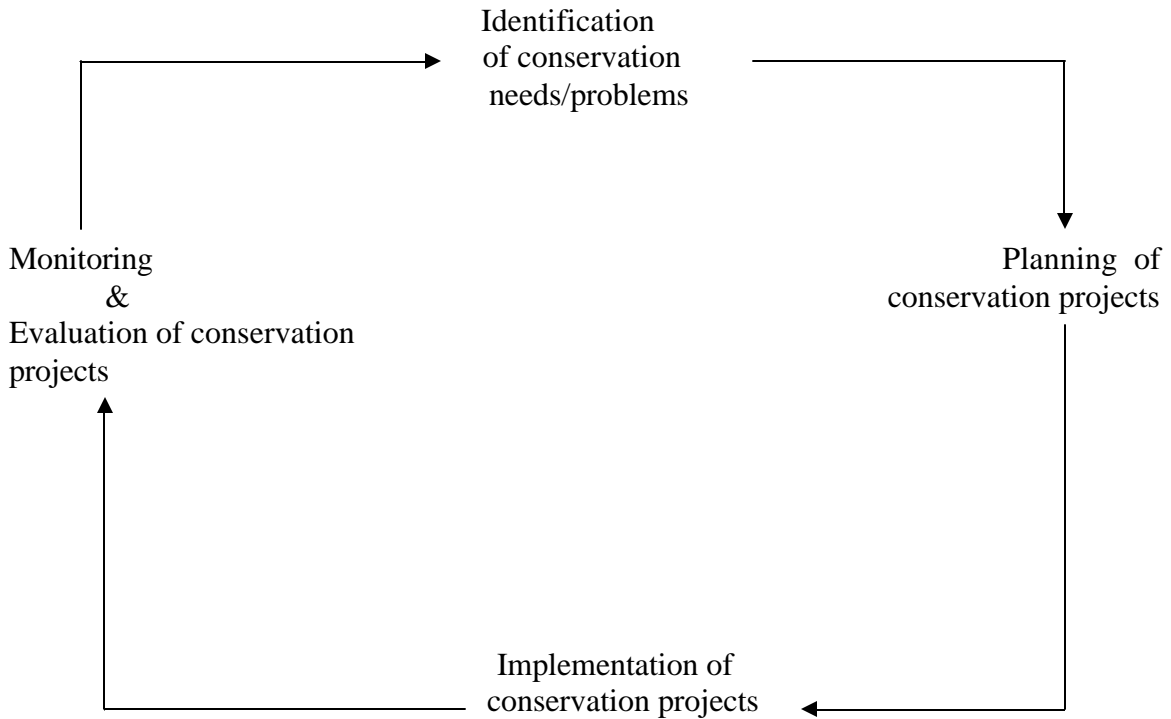
3.9 Build on compensational practices

Due to the fact that land is communally owned and administered through the King's traditional structures, the Government of Lesotho has paid little attention to compensational policies about land acquired by Government for development projects. This non-compensational act of the government ignores the negative impacts of some developmental projects on the country's eco-system. To reduce the negative impact of government development projects, re-forestation needs to be encouraged where deforestation has taken place. Consequently, land will have to be provided elsewhere in compensation for conservation of those species affected by development projects. If this good practice is upheld, sustainability of Lesotho's country's eco-system will be enhanced.

4. PARTICIPATORY MODEL FOR CONSERVATION PROJECTS

To ensure that the recommendations put forward are allowed to unfold systematically, a participatory model is further recommended to facilitate an ideal community-based conservation practice. The suggested model starts with the project cycle which is shown in Figure 2.

Figure 2: Project cycle of conservation initiatives



4.1 Identification phase of community-based conservation problems

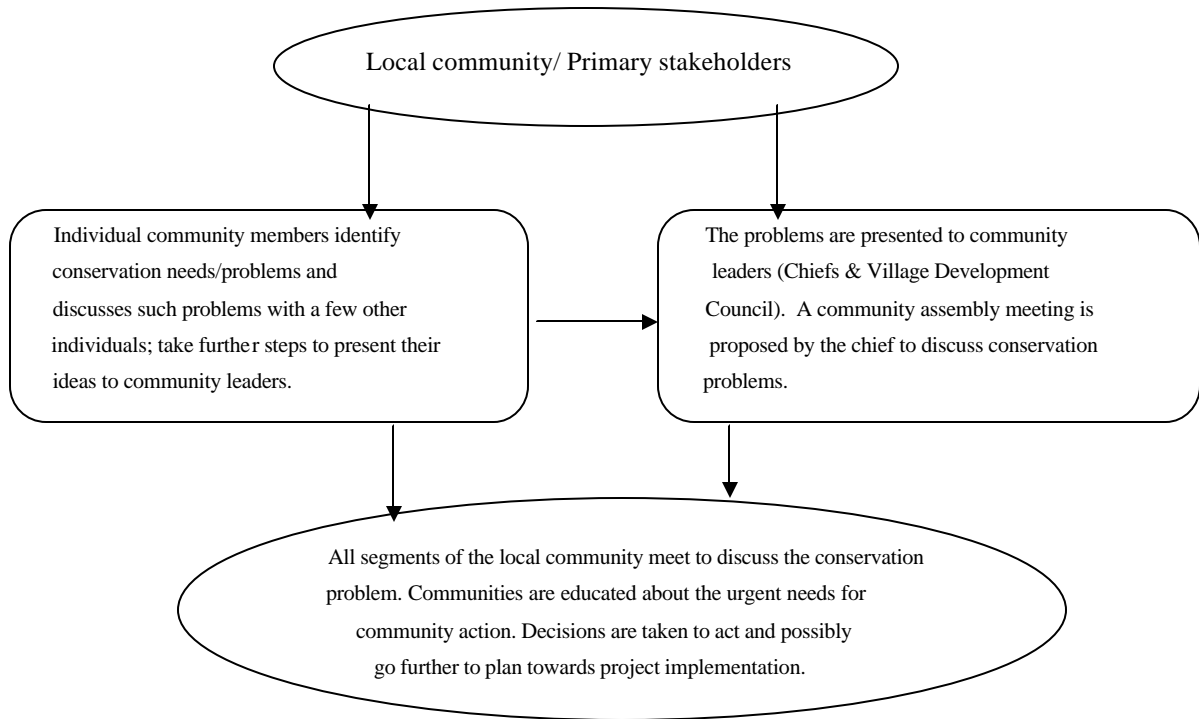
Being the first step, the identification process of community-based conservation needs of a community requires that the following underlying processes are adhered to:

- Identify conservation problems in a community
- Prioritise conservation problems
- Find out causes of conservation problems

Address causes of conservation problems while considering option analysis in carrying out the above exercises.

Above all, this study recommends the following steps as shown in Figure 3 as a necessary process for identifying community-based conservation projects

Figure 3: Identification phase of community-based conservation projects



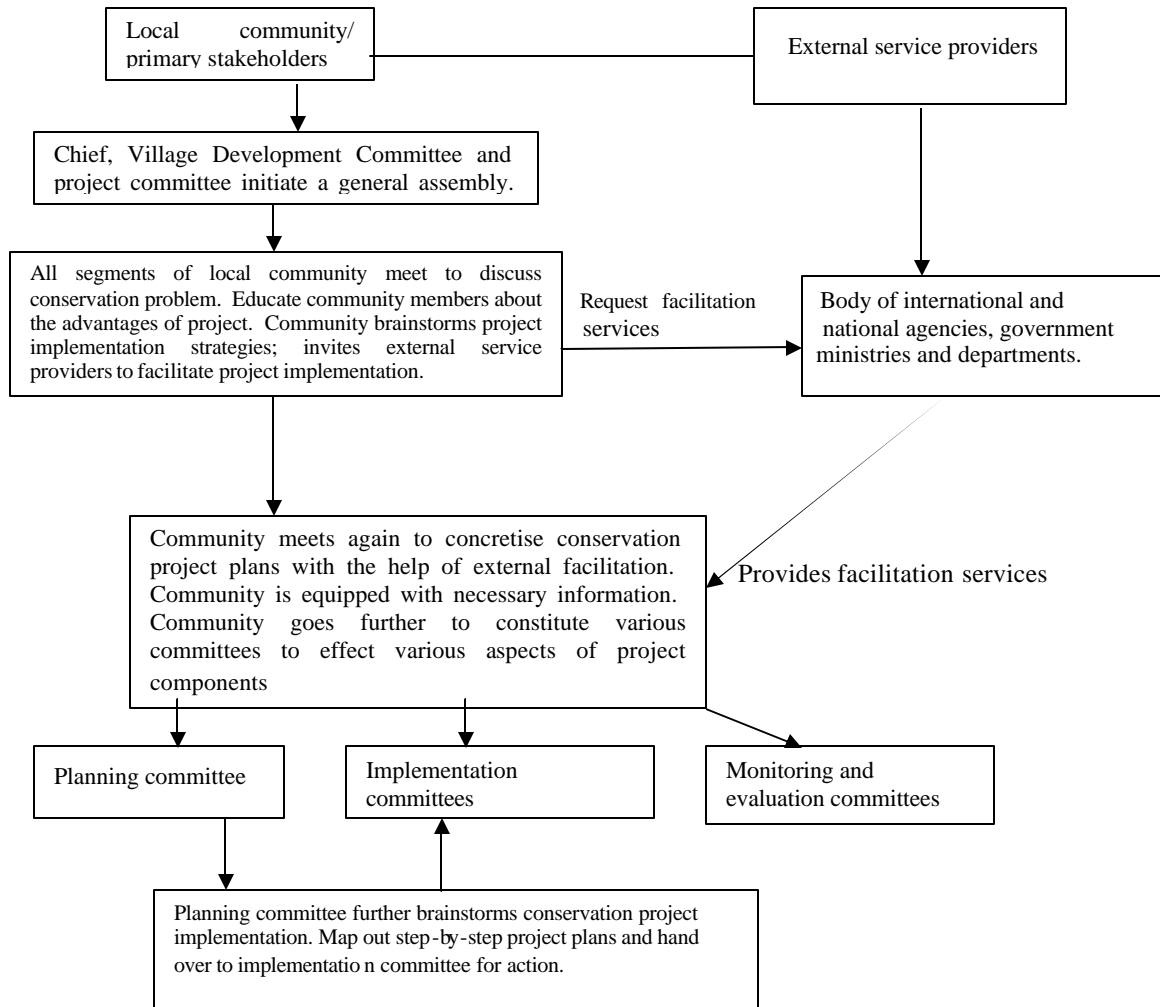
While undergoing the above processes, the considerations that need to be made to ensure total community support include the following:

- Consider the project's potential to provide benefits to a broad spectrum of communities involved
- Consider the likelihood of cooperation among stakeholders in the project
- Consider the level of involvement of the marginalised groups within a community.

4.2 Planning phase of community-based conservation programmes

To be able to plan for community-based conservation projects, this study recommends that local communities adhere to the following planning procedures.

Figure 4: Planning phase of conservation projects



Apart from the above phase stakeholders also need to adhere to the following:

- Agree on conservation project's objectives by community assembly.
- Define conservation project's major activities.
- Define time and duration of each project activity.
- Determine costs of each project activity.
- Define structures of implementing committees and their responsibilities.
- Document the project's planning matrix.
- Review conservation project plan when necessary.

Apart from the above steps involved in planning a conservation project, it is also recommended that planners should:

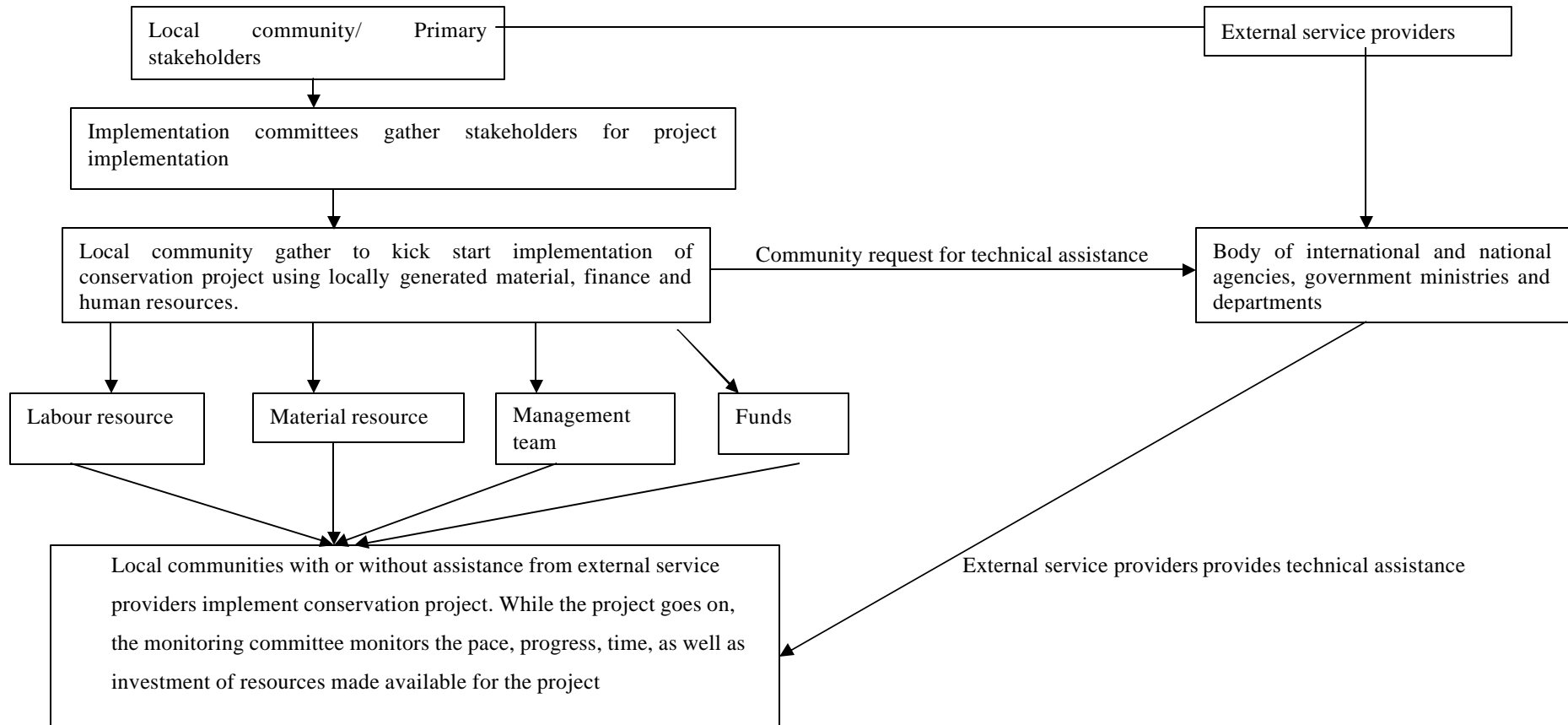
- Do a feasibility study to determine what conservation project can realistically be embarked upon and also determine whether the project is feasible.
- Determine whether the total cost of the conservation project can be raised realistically within the community or sourced externally and who will pay for what.
- Determine whether the priority groups in the community will benefit from the conservation project.
- Ensure that quarterly meetings for monitoring and evaluation teams to present their findings and lessons learned about the project implementation to the community general assembly are held.
- Determine whether the conservation project will achieve its objectives.

The foregoing considerations are important because, no community, no matter how remote, would invest time, efforts and other resources into a conservation project that is likely not to succeed and benefit them (German & Gohl, 1999).

4.3 Implementation phase of community-based conservation project

For the implementation of a community-based conservation project the study recommends the processes depicted in Figure 5 below.

Figure 5: Implementation phase of conservation projects



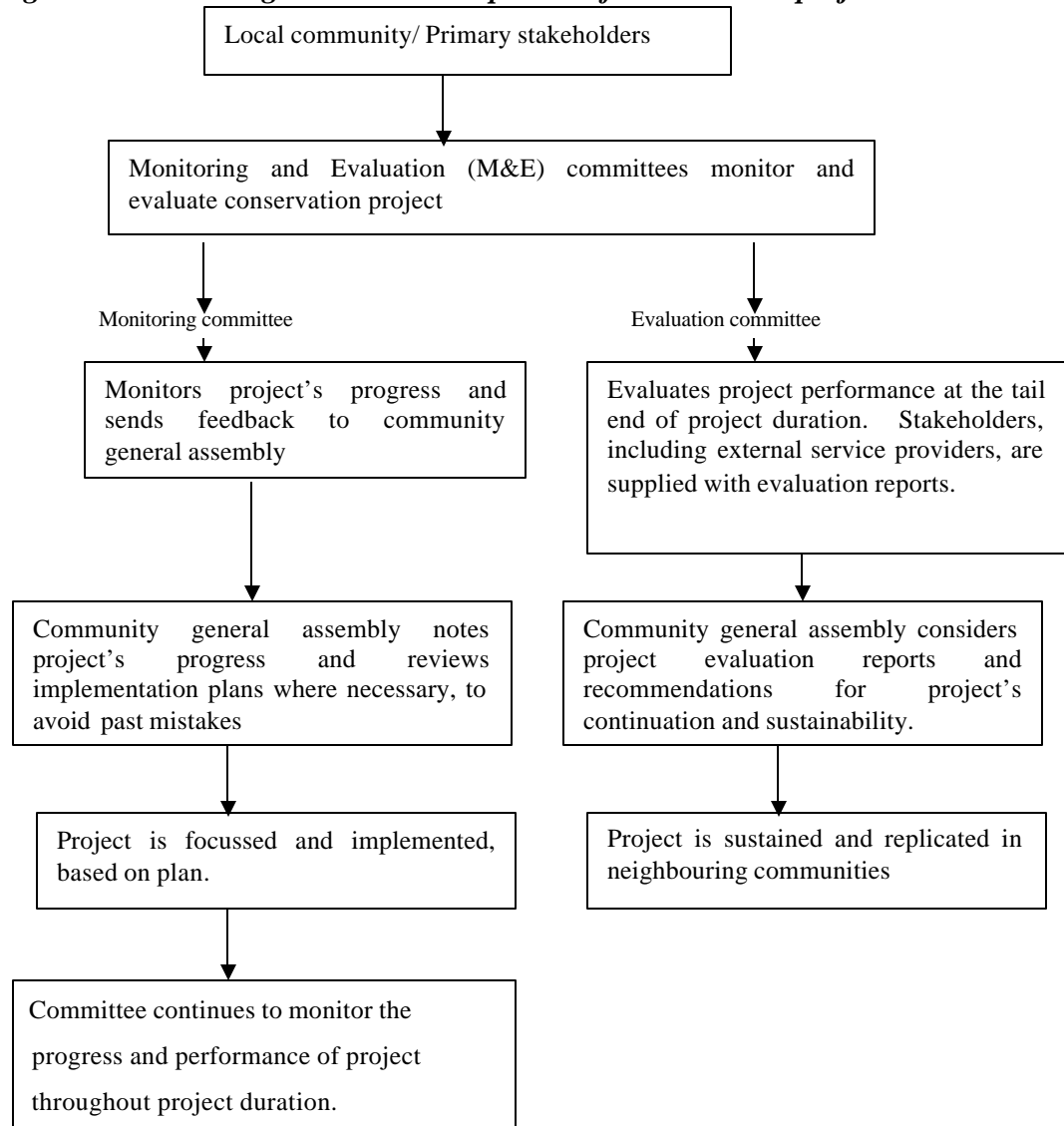
The following considerations are also recommended to ensure effective implementation of community-based conservation projects:

- Ensure that there are sufficient skills to manage the conservation project.
- Ensure that funding is readily available for various conservation assignments and activities.
- Ensure limited conservation specialist facilitation.
- Set very clear terms of reference for implementing committees, sub-committees and/or teams responsible for conservation projects.
- Ensure that budget is strictly adhered to by implementing committees.
- Ensure that all stakeholders are involved and that power is decentralised.
- Ensure that indigenous knowledge is applied.
- Ensure that sustainable incentives are provided to local communities.
- Ensure that maintenance culture is propagated among local communities.
- Ensure that the idea of self-reliance among local communities is established.
- Ensure that adequate recognition is given to labour contributions
- Ensure that community ownership is established.
- Ensure that local communities are empowered for conservation tasks.
- Ensure that local communities are committed to the project.
- Ensure that stakeholders, particularly local communities, understand the long-term process of conservation projects.
- Ensure that those who are willing and prepared and whose reasons for participating extend beyond their own personal needs and agendas are involved.

4.4 Monitoring and evaluation phases of the community-based conservation project cycle

Monitoring and evaluation responsibilities, the fourth and fifth phases of the conservation project cycle, also require local communities' involvement, and, for the people to carry out those exercises effectively, this study recommends the following, as shown in Figure 6 below.

Figure 6: Monitoring and evaluation phases of conservation project



Having established by this study that monitoring and evaluation have been one of the main conservation project cycles in which local communities have not participated actively, it is therefore recommended that local communities be made to take up the responsibilities involved in monitoring and evaluation. As shown below, this can also be achieved by empowering the people through extension education tools (German & Gohl,1999).

4.4.1 Equipping local communities for monitoring and evaluation tasks

Educate local communities on the following:

- How to identify the qualities of the monitoring and evaluation committee members.
- How to constitute monitoring and evaluation committees at the local community level.
- How to demarcate roles and responsibilities of conservation project management committees.
- How to monitor and evaluate conservation projects.
- Feedback processes between management committees and the local communities general assembly.
- Follow-up reviews of conservation plans and change in respect of evaluation indicator processes.
- How to adopt the community-based monitoring approach and how to allow it to replace the externally-based type.
- How to adjust the monitoring system, based on developments and the changing phases of conservation projects.
- How to mobilise professional people who have redundant skills in local communities for these exercises.

4.4.2 Important tools for monitoring and evaluation (M&E) assignments

This study recommends the tool shown in Table 26 to equip local communities for monitoring and evaluation tasks. These include tools for signs of improved land resources; internal institutions; an external organisational chart; meeting the implementation calendar; and service providers' agreement tools (German & Gohl 1999:16).

Table 26: Tools for Monitoring and Evaluation of conservation projects

Tool	Purpose	Input
Signs of improved land resources.	<ul style="list-style-type: none"> Communities track local change over time to establish whether they are moving towards achieving the long-term conservation vision. 	<ul style="list-style-type: none"> Table provides a baseline for conservation activities by measuring local signs of improved land resources at the present time. Community members responsible for M&E update the chart periodically to measure community's progress towards achieving conservation vision. Community members responsible for M & E bring updated table of signs of improvement to periodic community meetings, to suggest changes to conservation plan.
Internal institutional chart	<ul style="list-style-type: none"> Community members need to identify the local level institutions (LLIs) that they intend to build upon. Community members need to rate community's satisfaction with these institutions. 	<ul style="list-style-type: none"> Chart, lists the name of each community institution, its principal activities, and the level of community satisfaction with the institutions. Satisfaction is rated using symbols, representing satisfaction from "bad" to "very good". Community satisfaction with internal institutions can provide another means of assessing change in community's land resource and conservation over time.
External organisations chart	<ul style="list-style-type: none"> Allow community members to identify the external organisations that could assist the community. Provide community members with a basis for discussing service providers' agreements. 	<ul style="list-style-type: none"> Chart lists the name of each external organisation, its principal assistance in the conservation project, and the community's level of satisfaction with the organisation's assistance. Community satisfaction with external organisations' assistance can over time provide another means of assessing change in community's land resources conservation.
Meeting project's Implementation calendar	<ul style="list-style-type: none"> Facilitate regularly, and open records of community communication about conservation activities. Plan and organise local conservation activities to improve the livelihood of people. 	<ul style="list-style-type: none"> Plan all community meetings, and record whether or not they took place as planned.
Service providers' agreement	<ul style="list-style-type: none"> Create a common document that summarises the expectations of each party. Encourage previously non-evaluated services to be evaluated. Identify community's responsibilities to external service providers. 	<ul style="list-style-type: none"> Agreement should list the activities planned between a community and external service providers. The responsibilities of each party in undertaking the activity; the party or person(s) responsible; the deadline for each activity and the actual date of completion of each activity should also be documented.

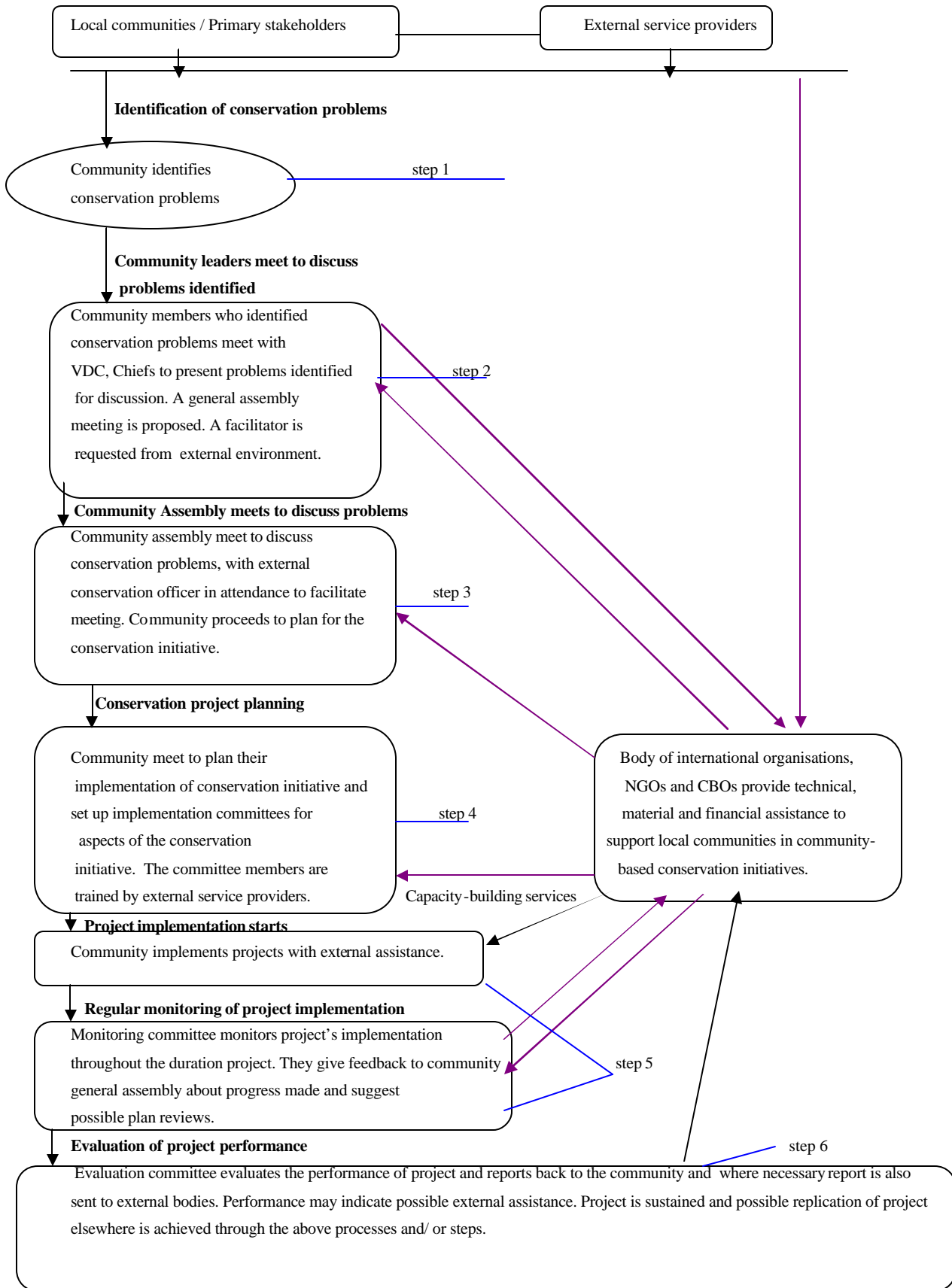
Source: German & Gohl (1999: 16-17)

4.5 Step-by-step model⁶ for community-based conservation programmes

Having prescribed the roles and responsibilities for local communities and external service providers and/or external stakeholders throughout conservation project's cycle, I make this further attempt to integrate the entire conservation project's cycle into a step-by-step model for community-based conservation programmes as shown in Figure 7 below.

⁶ The term step-by-step model depicts the cycle of community-based conservation projects and the roles and responsibilities of stakeholders at different stages of the conservation project cycle. In a way, it suggests an allocation of tasks to both the primary and secondary stakeholders, beginning with the identification of conservation problems, through decisions to embark on a priority conservation project, to the final step of monitoring and evaluation of project performance.

Figure 7: Step-by-step model for community-based conservation practice



The above model assigns prominence to local communities in conservation projects from the problem identification cycle through to the monitoring and evaluation cycle. Government top-down conservation approaches and management styles will thereby be transformed into community-based approaches. From the very first stage local communities are meant to identify conservation problems and/or needs and then conscientise the entire community about the conservation problems through local development channels such as the chiefs and village development committees. The entire community then meets to discuss the identified conservation problems. For the purposes of technical and advisory assistance often expected from the external agencies, it is suggested that experienced conservation officers be assigned to facilitate local communities' discussions. Based on the vital information made available to the local communities by the conservation facilitators, the officers and local communities proceed to plan and implement conservation initiatives. Contrary to the practise of conventional approaches, it is also recommended that local communities monitor and evaluate conservation project performance. However, external evaluation, allowing local communities input is also recommended where external technical and funding inputs have been invested. In a nutshell, this recommended step-by-step model surrenders the centre stage of conservation activities to local communities.

In ensuring that local communities accomplish their new roles and responsibilities which the shift from conventional to community-based approaches surrenders to them-guidelines are recommended that focus on the local communities' conservation awareness, their capacity-building principles and policies, their involvement and their incentives and motivation to participate in conservation programmes. The guidelines recommend the roles of both the primary and secondary stakeholders in enhancing the good practices of community-based conservation programmes. The above recommendations notwithstanding, it is suggested that it will be in the interest of humanity that issues surrounding the conservation of land resources are widely addressed beyond the scope of this study. This is to further capture the interest and commitment of stakeholders, particularly the local communities.

Having suggested the above, this study now goes further to suggest some other important aspects of community-based conservation practices that need further study.

5. GUIDELINES FOR IMPLEMENTATION OF COMMUNITY-BASED CONSERVATION PRACTICES (NEW ROLE OF SECONDARY STAKEHOLDERS/EXTERNAL ENVIRONMENT)

This section recommends guidelines that could enhance the successful practice of community-based conservation programmes. It contains sub-sections that recommend guidelines to enhance community awareness; local communities' capacity building; principles and policies of community involvement and incentives and motivation to local communities. The roles of stakeholders' highlighted below emerged from this study.

5.1 Local communities' awareness (the roles of secondary stakeholders)

To ensure that Lesotho local communities are made aware of their new roles and responsibilities in conservation activities it is recommended that the tasks of equipping local communities with the necessary knowledge through the following strategies be the responsibilities of the secondary stakeholders. These include:

- Develop communities' awareness strategies on conservation programmes while assigning priority to youth and children mobilisation.
- Also build on mass-mobilisation rather than individuals and group approaches. Individual approach is a slow means towards achieving community-based conservation practices (see Chapters five and six).
- Educate local communities about the values of conservation, the need to become involved in conservation activities; and the benefits that accrue from conservation activities.
- Educate the people on clear lines of local communication that would to sustain good relationships between community members (see Chapter six). This is important because, well-structured relationships through mutually-agreed forums can ensure

that every section of a community is included in negotiations, decision-making, management and conflict resolution arising from conservation initiatives.

- Acquaint local communities with their new roles and responsibilities, principles and policy procedures, and towards achieving community-based conservation practices; and
- Educate the people about ways of ensuring efficient planning of conservation activities.

Ways and means of improving local communities' awareness, having been proposed the guidelines that would ensure that the people are capacitated and empowered to tackle conservation tasks are next proposed.

5.2 Capacity building and empowerment of local communities (the roles of secondary stakeholders)

In addition to already proposed roles and responsibilities of secondary stakeholders towards capacity building and the empowerment of local communities, the following roles are also proposed and these include:

- Providing help to local communities to identify persons who have retired from relevant government and services who reside within the local communities; the use such persons as focal point to capture the interest of the greater majority of local community members.
- Establishing a capacity building unit at the National Environment Secretariat, as well as the Local Government Councils.
- Developing pilot projects randomly in some selected local communities. (see Chapter five).
- Developing vocational training centres within local communities to train the people for conservation tasks. (see Chapters five and six).
- Developing effective erosion-control measures, which should include measures to rehabilitate and reclaim the degraded lands while considering indigenous techniques (see Chapter two and five).
- Achieving the inclusion of local community members in conservation extension

work. This practice allows for effective community management without much external assistance.

- Local communities need to be able to finance conservation schemes without much external intervention. Vocational centres, cooperative organisations; provision of interest-free loans as well as provision of material/equipment with which to set up small-scale businesses (see Chapters five and six).
- Local communities also need to be trained on fund and business management.
- Train the herd-boys to participate most actively in conservation works. This is because they contribute to land degradation by herding their livestock to graze on a unauthorised and protected land areas. (see Chapters five and six).
- Train local community members on principles of conflict resolution.

The roles of the secondary stakeholders towards capacitating and empowerment of local communities, having been proposed the principles and policies that guide the guidelines laid down are next proposed.

5.3 The principles and policies for both the primary and secondary stakeholders

The following principles and policies are proposed for the practice of community-based conservation. The principles and policies for both primary and secondary stakeholders are proposed under separate sub-headings.

5.3.1 The principles for primary stakeholders

The principles proposed for primary stakeholders include:

- Local communities need to take pro-active prevention measures against land degradation to avoid much negative impact on land resources.
- Ensure efficient planning of all future conservation activities.
- Avoid the domination of some interest groups or a small unrepresentative leadership clique within a community. (see Chapters five and six)
- Ensure that community members share equitably in the benefits and responsibilities of conservation activities.

- Ensure transparency in the management of conservation activities; and
- Ensure that conservation projects remain in line with community's values and cultural dynamics.
- Introduce user-fee system. This can encourage economic rationality in land resources users. As earlier noted, not all land resources and their uses may be included under the user-fee list.
- Ensure that equal recognition in value in terms of participation is accorded to soft issue and hard issue².

5.3.2 The principles for secondary stakeholders include:

The principles proposed for the secondary stakeholders include the following:

- Facilitators need to avoid creating high expectations amongst local communities so that the people can participate genuinely in conservation activities.
- Officers need to respect local communities indigenous contributions as manifested in local knowledge and skills. (see Chapters five and six).

Officers should facilitate local communities' conservation initiatives and disregard practices that hinder communities' future conservation initiatives.

5.4 Policies for primary stakeholders

The policies proposed for both the primary and secondary stakeholders to ensure effective practices of community-based conservation programme include the following:

² The term "hard issue" used in this study means financial, technological, material and local communities' capacity-building support offered by government agencies (national and international) for conservation projects. These inputs are perceived to be more important than other inputs offered by other stakeholders. The conventional approaches have made it near impossible for local communities to comfortably provide the hard issue inputs for all categories of conservation projects.

The term "soft issue" represents local communities' means of participation, which includes provision of manual labour, application indigenous knowledge, local available resources and sometimes, security services to protected areas. In the case of conventional approaches, soft issues are not regarded to be as important as hard issues, despite the fact that soft issues play pivotal roles in CBC approaches. Labour, indigenous knowledge and security services provide sustainable means to conservation projects.

5.4.1 Primary stakeholders

The following policies are proposed with a view to enhancing local communities' participation in conservation activities.

- Policy that will ensure that income generated from the 'user-fee' measure is invested within the local community or shared equitably to community members is proposed. (see Chapters two and five).
- Policy on gender equality, which should remove restrictions against female ownership of land, as well as the old culture which does not allow women to take decisions pertaining to land, is also proposed. (see Chapters two, five and six).
- Policy needs to be made that spells out the process of community involvement in land resources conservation, rehabilitation and maintenance activities.
- Legislation against night grazing also needs to be made a policy matter.
- Policy to educate local communities about the provisions of land laws is also proposed. The translation of the revised land laws into the Sesotho language will enable most of the rural populace to have access to information contained therein. (see Chapters two, five and six).

5.4.2 Secondary stakeholders

The policies proposed for secondary stakeholders include:

- Policy needs to be set out on the magnitude of conservation projects that could attract government's assistance.
- Standard policy needs to be made on equality of government's assistance to local communities that have initiated conservation projects. This will remove the preferential government treatment experienced in Lesotho.
- Policy addressing the issue of poverty which participants consistently raised as an impediment to local community participation in conservation - is inevitable for the successful practice of community-based conservation programmes.
- Policy to avoid clashing approaches being practiced by conservation agencies, which confuse local communities, is also proposed in order to enhance community participation (see Chapter five).

Apart from the above principles and policies, guidelines are also proposed for effective incentives and motivation that will enhance community participation in community-based conservation programmes.

5.5 Incentives and motivation (the roles of mainly the secondary stakeholders)

It has been confirmed that incentives and motivation determine the level of community involvement in conservation activities (see Chapters five and six). The underlying guidelines are therefore proposed to motivate local communities to become involved in community- based conservation activities.

5.5.1 Incentives to participate in conservation (the role of secondary stakeholders and community leaders)

The following incentives that could enhance local communities' participation are proposed.

- Depart from food-for-work or cash payment-for-conservation work. Instead, invest in procurement and supply of seedlings, construction stones and other useful materials required for conservation works the reason being that, Lesotho cannot afford to pay cash to its citizens to participate continuously in conservation activities.
- Certificates of honour / merit may be awarded to community members who have distinguished themselves in conservation work. Environment departments, local government authorities and community leaders need to invest in these.
- Sustainable incentives need to be provided to local communities. Incentives such as supply of seedlings, development of nurseries for local communities, borehole water supply and the construction of dams may be considered as sustainable incentives to local communities. (see Chapters five and six).
- Sharing adequately the benefits of conservation works among all community members and distributing, interest-free, revolving loans amongst community members may also be an attractive incentive package that could enhance local community participation.
- Priority project needs, possibly access roads, electricity, schools, hospitals, and

income generating projects, are also likely to help local communities sustain their participation (see Chapters five and six).

5.5.2 Motivational incentives (the role of secondary stakeholders)

The following are recommended motivational incentives to help enhance the level of community participation in conservation programmes.

- As indicated earlier, it is recommended that conservation pilot projects be establishing in selected local communities to enable conservation officers to demonstrate to land users (farmers) that conservation is beneficial, and that degraded lands can be rehabilitated and converted productive uses. Such demonstrations by conservation officers can motivate local communities to practise similar conservation activities.
- Motivational tours to communities where community-based conservation works have been successfully carried out by other local communities can motivate the people. Interested persons and groups, also those who doubt the convertibility of degraded lands into profitable uses, can be shown such experiences.
- Ensure that extension officers are always in the field to facilitate local communities' conservation works. Working with local communities demonstrates the commitment of the professionals conserving and rehabilitating degraded lands. These extension officers can motivate the local communities.
- The idea of having extension officers from head offices located in capital cities pay occasionally visits to farmers has never been rewarding. Officers should reside with land users in the local communities, so the people can have access to all the necessary information to manage and conserve land resources. This proposed close link could motivate the local communities to participate in conservation activities.
- Extension officers must also equip themselves with indigenous knowledge. Such a give-and-take process not only motivates local communities, but could also strengthen the practice of community-based conservation practices.

The above guidelines have laid emphases on limited collaborative conservation programmes between primary and secondary stakeholders.

5.6 Collaborative management of conservation programme

As already proposed, community-based conservation programmes require some degree of external assistance, which could come from collaborating partners at different stages of any conservation project. Guidelines that would control the powers, access, rights and responsibilities of collaborating partners are therefore proposed to facilitate effective collaboration and/or joint management of conservation programme so that the primary stakeholders are not relegated to the background (see Chapters three and five).

5.6.1 The role of all stakeholders

It is the responsibility of all stakeholders to ensure that joint management of conservation programme is effective. Such responsibility entails:

- Maintaining active and on-going dialogue and discussion with stakeholders to secure the co-operation and support required for community-based conservation programme.
- Avoiding selective participation in conservation work.
- Avoiding hand picking of local communities' representatives.
- Ensuring equitable and adequate distribution of benefits accruing from conservation project must be ensured.
- Assigning appropriate value to labour, time invested in patrolling, watching and protecting conservation areas. (Chapters five and six).
- Allowing bottom-up approaches to be complemented by official facilitation. (see Chapters five and six).
- Involving all stakeholders and neighbouring communities in conservation activities.
- Ensuring trust amongst stakeholders in conservation projects.

5.6.2 Other guidelines for collaborative management:

- Establish the fact that partners have common objectives and also ensure clarity about such objectives.
- Ensure that conservation management plans are drawn up and that this is done in close consultation with other partners
- Ensure that local communities need to have powerful positions in the collaborative management committees.
- Ensure that technical expertise for advisory roles such as lawyers is involved for the interest of primary stakeholders (This applies for protected areas). (see Chapter three).

5.6.3 The role of the secondary stakeholders

- Secondary stakeholders need to avoid handing over ready-made solutions of other conservation initiatives to local communities for implementation.
- They should assist local communities in carrying out conservation activities in their own ways.
- They should create the position of Environmental Economist (EE), in any conservation project and ensure that this officer reaches out to the local communities to educate the people about the values of land resources.

While trying to capacitate local communities for monitoring and evaluation tasks, it is also recommended that

- the people should be available, open minded, patient, respectful, honest, and have strong commitment to the tasks.
- the people need to have the requisite skills in the analysis and re-assessment of conservation activities.
- many persons need to be trained instead of a few local community members;
- efforts should be made to use local language to describe the concept of monitoring and evaluation.

6. SUGGESTED AREAS FOR FURTHER STUDIES

This study does not claim to have encompassed all aspects of community-based management and conservation of land resources. However, it has addressed a number of issues including good conservation practices and the strengths and opportunities, which these offer (see Chapter five). This study has also outlined some possible threats that may continue to impact on the good practice of community-based conservation. Therefore, to ensure that some of the threats identified do not continue to hamper good conservation practices, this study suggests that further studies be carried out in the following areas:

- One of such areas suggested for further studies is to **determine the economic value of land resources**. In Lesotho, land resources have no recognised economic value, and have thus been regarded as free-for-all resources. This free-for-all atmosphere in the country suggests the reason for the high level of unsustainable use of land resources (see Chapter one and Chapter two). It has been established that educating local communities as to the economic value of land resources, which has not been strengthened due to a lack of accurate economic value on land resources, has affected local communities' commitment to conservation activities. It has further been established that such knowledge could have helped to limit the erroneous assumptions that land resources are free gift of nature and renewable and should therefore be used without control. In any case, any value placed on land resources without a study to determine the user-fee mechanisms may be an incomplete exercise. Therefore, a further study is recommended to determine the economic value of land resources and the user-fee systems. The findings of such study will go along way towards in ensuring sustainability.
- This study also confirmed that **land tenure systems** in Lesotho have been a major hindrance to community involvement in land resources conservation, because the existing tenure systems have been beclouded by favouratism, insecurity of ownership, denial of women's rights to own, inherit and be allocated land, and so on (see Chapter two). How could conservation programme be made successful in an environment where inequity and injustice are the order of the day? The researcher is aware that studies have been conducted on Lesotho's tenure systems

but suggest that not much of such studies have provoked major changes in the tenure systems. On this basis, this study suggests that further studies be carried out on the role of women in Lesotho's land tenure systems with regard to conservation of land resources. This kind of study could provoke national debate and discussions that may hasten the review of the Lesotho Lerotoli Land Laws. Such studies could also lead to a complete phasing-out of discriminatory practices and cultural bias against women regarding land tenure systems in Lesotho.

- The issue of **sustainable incentives** was raised several times throughout this study. The provision of the type of sustainable incentives suggested in (Chapter five) would require joint efforts by government ministries, departments, international organisations and donor agencies. This is because most conservation agencies lack the resources to meet the demands of local communities. Therefore, further research is suggested in the area of collaborative management with regard to the provision of sustainable incentives that would sustain local communities' involvement in conservation activities.
- Last but not least, is the **problem of poverty** among local communities, which also surfaced repeatedly in this study (see also Chapters two and five). This study has taken cognisance of some attempts in this area to address poverty. However, these attempts have no impact on the capacity building of local communities as a means of addressing poverty. Therefore, further research on empowering and capacity building of local communities with regard to livelihood security is strongly suggested. This suggestion is made for study because investing in empowering and capacitating local communities towards conservation tasks could help to enhance sustainability of land resources.

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ANNEXURE 1

(Map of Africa showing location of Lesotho)

ANNEXURE 2

(Map of Lesotho showing study communities)

ANNEXURE 3

(Map of Asia and Africa showing areas of case studies)

ANNEXURE 4

INTERVIEW QUESTION GUIDE FOR CONSERVATION PROJECT OFFICERS

1. How do your agency currently involve the local communities?
2. What is the ratio of involvement of males/females involvement in your conservation projects and why?
3. What type of problems do you experience in working with local communities?
4. How do you educate the local communities about land resource conservation in Lesotho?
5. What is your perception about indigenous knowledge in land resource conservation in Lesotho?
6. What are the social implications of the contradictory conservation approaches used by different conservation agencies?
7. What are the conservation policies that should be enforced to ensure community participation in conservation activities in Lesotho?
8. To what extent does funding affect community involvement in conservation activities in Lesotho?
9. How do you ensure that local communities participate in government - initiated conservation projects?
10. What are the obstacles confronting local communities in conservation in Lesotho?
11. What kind of incentives do you think will enhance large-scale community participation?
12. In what ways do inadequate local capacity building affect community participation in conservation in Lesotho?
13. How can the existing local community human resource capacity be developed to meet the challenges of conservation problems in the lowlands?
14. How does community involvement in conservation impact on sustaining land resource? Kindly explain.
15. What is the future of community-based conservation in Lesotho.

ANNEXURE 5

FOCUS GROUP DISCUSSION QUESTION GUIDE FOR LOCAL COMMUNITIES

1. What are the current and previous attempts made by your community to address land degradation problems?
2. How do your community learn about current conservation measures?
3. What does the government think about the way you conserve land resource?
4. How would your community respond to a situation where you are required to:
 - i) Pay for land resource use?
 - ii) Replant chopped down trees and plants?
 - iii) Employ rotational farming methods?
 - iv) Control stocking, etc.?
 - v) Participate in conservation works without cash and/or food incentives.
 - vi) Sustain government - initiated conservation projects?
5. How can you work in joint conservation projects with the government?
6. To what extent can your community accomplish conservation initiatives without external assistance?
7. What could be done to strengthen local community capacity to meet the challenges of land resource degradation in your community?
8. What kind of incentives do your community require to participate in conservation of land resources activities?
9. What are the main stumbling blocks that prevent local communities from participating in government initiated conservation programme?
10. How can these stumbling blocks be removed or avoided?
11. How can local communities be involved in conservation of land resource?

ANNEXURE 6

Table 1: Management cadre of the MoA, NES & EMPR

Name	Official Position/Agency	Contact Address
Seetla Michael Mabaso (Mr.)	Chief Conservation Officer, Ministry of Agric. Lesotho.	+266-22322876
Malephane N. Jean (Mrs.)	Director, National Environment Secretariat, Lesotho.	+266-22311767
Ntokoane, R.L (Mr.)	Manager, Environmental Management for Poverty Reduction project, Lesotho	+266-22311767/22314763
Majara Nthabiseng (Mrs.)	Management Sector, SADC Office, Maseru, Lesotho.	
Kabi, N.S. (Mr.)	Principal Land Use Planner, Ministry of Agric., Land Use Division, Maseru, Lesotho.	+266-22325851
Bernice Puling (Mrs.)	Principal Environmental Scientist (EIA), National Environment Secretariat, NES, Lesotho.	+266-22311767 Ext: 151

Table 2: Information/Education Officers at the MoA & EMPR

Refiloe Nts'ohi (Ms.)	Parks Information and Education Officer, Ministry of Agric. Conservation Unit, Lesotho	+266-22322876
Palesa Mapetla (Mrs.)	Information Officer EMPR, projects.	+266-22311767

Table 3: Field Officers of MoA & EMPR

Name	Designation	Contact
Neo Mothoko (Mr.)	Senior Conservation Officer Ministry of Agric. Conservation Division.	+266-22323600
Lerato Motoai (Ms.)	Assistant Conservation Officer, Maseru District, Ministry of Agriculture.	No phone contact number
Motla T. Moepi (Mr.)	Soil Conservation Officer, Maseru District.	+266-22311767
Bonang Mosiuoa (Ms.)	Field Officer, EMPR Project, Mafeteng District.	+266-23311767
Ngakantsi Moshoeshe (Mr.)	Field Officer, EMPR Project, Maseru neighbouring District.	+266-23311767
Moliekoto Mojakhomo (Ms.)	Field Officer, EMPR Project, Mohale's Hoek District (Mafeteng Neighbouring district)	+266-23311767
Motsieloa Tolamo (Mrs.)	Conservation Officer, Ministry of Agriculture.	+266-22700269

Table 4: Study Research Assistance

Names	Rank Conservation	Address
Lechaba Setjeo (Mr.)	Field Officer, Maseru District	Recently, a teacher, at Lesotho High School +266-22 312295
Mpine Molise (Mrs.)	Land Rehabilitation Field Officer, Mafeteng District	+266-22 311767

Table 5: Some of the Practitioners Interacted with in the Course of the Study

Name	Position	Address
Dr. H.M. Sibanda	Technical Advisor, EMPR, Lesotho	Currently in Gambia on UNDP Assignment
Dr. I.B. Ikpe	Head, Department of Philosophy, NUL (Philosophy of Development)	National University of Lesotho. Currently in Botswana University.
Prof. Q.K. Chakela	Professor, NUL (Natural resources management)	National University of Lesotho.
Mr. A.Obi	United Nations volunteer programme officer	UNDP office, Lesotho. Currently with Free State University, (Agricultural Economist)

