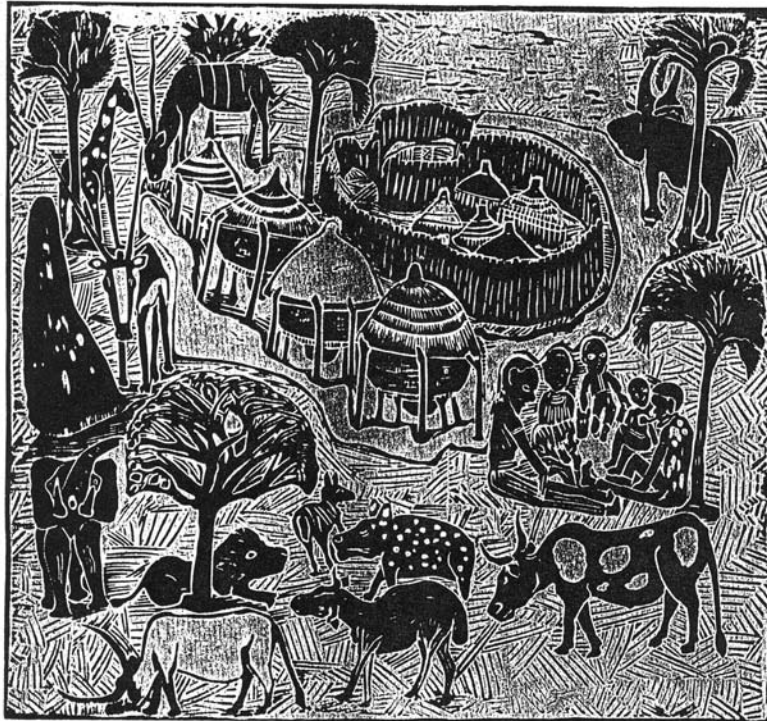


DEA RESEARCH DISCUSSION PAPER

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Namibia:
Land use planning and environmental sustainability
Contributions to an analytical framework for
sustainable land management

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and
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This series of Research Discussion Papers is intended to present preliminary, new or topical information and ideas for discussion and debate. The contents of this paper are not necessarily the final views or firm positions of the Ministry of Environment and Tourism or the Ministry of Lands and Resettlement. Comments and feedback are welcomed.

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The final draft report underwent an international peer review process. Detailed review comments were received from Dr. Shivute (Undersecretary MLR), Brian Jones (freelance, Namibia), David Dent (University of Wageningen), Frank Place (ICRAF), Helmut Eger (GTZ), Keith Shepherd (ICRAF) and Mary Seely (DRFN). Their comments were most stimulating and helped improve the final product.

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Cover illustration by Nangombe Kapanda

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List of Acronyms and Abbreviations

AALS	Affirmative Action Loan Scheme
ALAN	Association of Local Authorities in Namibia
AgriBank	Agricultural Bank of Namibia
AIDS	Acquired Immuno-Deficiency Syndrome
ARC	Association of Regional Councils
BIOTA	Biodiversity Transect Africa
BMC	Basin Management Committee
CBM	Community Based Management
CBO	Community Based Organisation
CBNRM	Community Based Natural Resource Management
CDC	Constituency Development Committee
CC	Conservancy Committee
CFC	Community Forestry Committee
CITES	Convention on International Trade in Endangered Species
CLB	Communal Land Board
CPP	Country Pilot Partnership
DAE	Division Agricultural Engineering
DAP	Division of Agricultural Planning
DAPP	Directorate of Agricultural Planning and Policy
DARD	Department of Agriculture and Rural Development
DART	Directorate Agricultural Research and Training
DASS	Directorate Administration and Support Services
DDC	Directorate of Decentralisation Coordination
DEA	Directorate of Environmental Affairs
DEES	Directorate Extension and Engineering Services
DGS	Directorate of General Services
DIP	Decentralisation Implementation Plan
DoF	Directorate of Forestry
DPIC	Decentralisation Policy Implementing Committee
DRDPCD	Division Rural Development Planning and Cooperative Development
DRFN	Desert Research Foundation of Namibia
DRM	Directorate of Resource Management
DRWS	Directorate Rural Water Supply
DVS	Directorate Veterinary Services
EIA	Environmental Impact Assessment
DWA	Department of Water Affairs
ELTOSA	Ecological Long-term Observations of Southern Africa
EMIN	Environmental Monitoring and Indicator Network
FAC	Forestry Advisory Commission
FAO	Food and Agriculture Organisation of the United Nations
FESLM	Framework for Evaluation of Sustainable Land Management
FMC	Fire Management Committee
FNP	Food and Nutrition Policy
FSNTC	Food Security and Nutrition Technical Committee
GEF	Global Environment Facility
GEOSS	Global Earth Observation Systems of Systems
GDP	Gross Domestic Product
GTOS	Global Terrestrial Observation Systems
HIV	Human Immune Virus
IDC	International Development Consultants
ILTER	International Long-term Ecological Research Network
IRDNC	Integrated Rural Development and Nature Conservation
IWRM	Integrated Water Resource Management
LA	Local Authority
LADF	Land Acquisition and Development Fund
LAC	Land Adjudication Commission
LB	Land Board
LLM	Local Level Monitoring
LR	Land reform
LRAC	Land Reform Advisory Commission
LT	Land Tribunal
LUP	Land Use Planning
LUEB	Land Use and Environmental Board

LVC	Land Valuation Court
LWPUA	Local Water Point User Association
MAWF	Ministry of Agriculture, Water and Forestry
MDG	Millennium Development Goals
MeatCo	Meat Corporation of Namibia
MET	Ministry of Environment and Tourism
MLR	Ministry of Lands, Resettlement and Rehabilitation
MRLGHRD	Ministry of Regional, Local Government, Housing and Rural Development
NAMCOL	Namibia College for Open Learning
NamWater	Namibia Water Corporation
NALAO	Namibia Local Administrators Organisation
NAP	National Agricultural Policy
NAPCOD	Namibia's Programme to Combat Desertification
NBSAP	National Biodiversity Strategy and Action Plan
NCSA	National Capacity Self Assessment
NDC	Namibia Development Corporation
NDP	National Development Plan
NDPS	National Drought Policy and Strategy
NFDP	Namibia Forest Development Policy
NFSP	Namibia Forestry Strategic Plan
NGO	Non Governmental Organisation
NLP	National Land Policy
NOLIDEP	Northern Regions Livestock Development Project
NNBP	Namibia National Biodiversity Programme
NPC	National Planning Commission
NPCS	National Planning Commission Secretariat
NPRAP	National Poverty Reduction Action Programme
NRP	National Resettlement Policy
NWP	National Water Policy
PESILUP	Promoting Environmental Sustainability through Improved Land Use Planning
PPA	Participatory Poverty Assessment
PRS	Poverty Reduction Strategy
PTO	Permit to Occupy
PWM	Parks and Wildlife Management
RC	Regional Council
RDCC	Regional Development Coordinating Committee
RDP	Regional Development Plan
RWC	Regional Water Committees
SADC	Southern African Development Commission
SME	Small and/or Medium Enterprises
SLM	Sustainable Land Management
SLM-IM	Sustainable Land Management Impact Monitoring
TA	Traditional Authority
TCCF	Technical Committee on Commercial Farmland
QLP	Quantitative Land Productivity Assessment
Unicef	United Nations International Children Education Fund
VCF	Veterinary Cordon Fence
VDC	Village Development Committee
WAC	Water Advisory Council
WB	World Bank
WC	Wildlife Council
WPC	Water Point Committee
WPUA	Water Point User Association
WR	Water Regulator
WRMA	Water Resources Management Agency

Executive summary

1. The World Bank commissioned a study report titled “***Namibia: Land Use Planning and Environmental Sustainability - Contributions to an Analytical Framework for Sustainable Land Management***” as a contribution to its on-going environmental country dialogue and Namibia’s Country Pilot Partnership (CPP) for Integrated Sustainable Land Management (ISLM). The specific tasks (see Appendix B) were to (1) review and provide inputs into the refinement of an environmental sustainability assessment methodology, (2) facilitate and maintain relevant stakeholder consultations, (3) feed into the review and provide an analysis of the current policy and legal framework in view of SLM and environmental sustainability, (4) explore (a) the content and approach to developing environmental sustainability criteria for land management practices, (b) the outline of a M&E toolkit facilitating the mainstreaming of environmental sustainability considerations into land management practices. **The aim of the report is to review and synthesise ongoing work in the LUP and SLM related sectors and draw lessons learnt from such work as a basis for the planning of directed interventions, which could be potentially brought forward in the scope of the CPP for ISLM.**

2. It is understood that sound land use planning processes are one key element to attaining sustainable land management. Empowering local natural resource users to take informed land and resource management decisions, track and monitor their resources and lay the foundation for adaptive management is understood to be key to livelihood security and development in Namibia’s rural areas. Developing tools and facilitating local level capacity building initiatives are seen to provide already established institutions such as conservancy, water point management and village development committees, as well as resettlement farmers with practical and thematic opportunities for improvement and action (Chapter 6). The land valuation process was identified as an additional topical area that would benefit from improved land use planning information and tools.

3. The report develops support interventions on the regional and national levels as well as the interface of all these scales, and it is seen to be essential to tackle land use planning improvements at the different levels in an integrated way. The strengthening of the enabling environment through the development of environmental sustainability criteria and standards for land management are believed to provide a framework for consolidated action in this regard. The report further alludes that a combination of participatory planning processes, scientific informed knowledge and an improved enabling environment are needed to address land use planning deficits in Namibia.

4. **Intensive stakeholder consultations took place during the assignment**, and were coordinated with and complemented by related consultative processes under the CPP for ISLM and the Promoting Environmental Sustainability for Improved Land Use Planning (PESILUP) project currently under development (see Appendix C).

5. The chapter sequence of the report is as follows:

Chapter 1: Theoretical and conceptual background to SLM and its relevance in the Namibian Context

- Namibia: socio-economic and environmental background, need for SLM
- Definition of terms: environmental sustainability, SLM, LUP, LR

Chapter 2: Assessment of the environmental sustainability of land uses

- How to assess environmental sustainability of LU and LM practices?
- Lessons learnt & methods applied elsewhere
- Proposals for Namibian national scale assessment; criteria, indicators and thresholds (Chapter 5)
- Recommendations: Assessment design and implementation(methodology, work plan, budgetary

Chapter 3: Policy analysis: Mainstreaming environmental sustainability into LM practices

- Review of policy environment, institutional arrangements and capacity to implement policy provisions; focuses on policies relevant to land and natural resource planning, allocation, access or user rights and management
- Identifies gaps, challenges, barriers, opportunities for addressing environmental sustainability
- Recommendations how to streamline SLM into land related policy

Chapter 4: LUP stakeholders and power analysis

- In-depth analysis of SLM and LUP stakeholders in Namibia, sketches existing power relationships
- Strategizes incentives that exist or could be developed for SLM

Chapter 5: Approach to development criteria for environmental SLM in Namibia

- Potential context, contents and approach for defining environmental sustainability criteria for SLM in Namibia
- Identifies major levels of development planning at which environmental sustainability criteria ought to be integrated

Chapter 6: LUP capacity development for integrated SLM

- Proposals for Namibian LUP toolkit for SLM at local and regional level and capacity building plans;
- Data and information available for integration in LUP toolkits (Chapter 2)
- Requisite layers of data for formal land evaluation procedures

Chapter 7: Findings and recommendations

- Synthesis of key messages stemming from integrated view of all Chapters
- Summary of key recommendations for national priority actions

CHAPTER 1: THEORETICAL AND CONCEPTUAL BACKGROUND TO SLM AND ITS RELEVANCE IN THE NAMIBIAN CONTEXT

6. In Namibia sustainable land management enjoys high priority on the development agenda. With more than two thirds of the country's population directly depending on subsistence farming for their daily livelihoods, continued investment in SLM will help maintain – and improve the benefits that can be generated from the land and its natural resources. Long-term viability is one key concern, applying to land in communal areas, on freehold farms and the ongoing resettlement programme pursued by the government. **Land degradation e.g. in the form of bush encroachment, soil erosion, deforestation and transformation of vegetation types has the potential to reduce/alter the productivity of agricultural/range lands.**

7. Chapter 1 provides some socio-economic and environmental data highlighting the importance of the land and natural resources to the economy and development and defines the terminology used throughout the report. The conceptual framework for this study is laid out and guidance is given as to the structure of the report. A short overview of the CPP for ISLM, a global case study for Global Environment Facility (GEF) of support under its Operational Programme (OP) 15, is given, and linkages are made to a specific intervention planned under the country umbrella, the Promoting Environmental Sustainability through Improved Land Use Planning project.

CHAPTER 2: ASSESSMENT OF THE ENVIRONMENTAL SUSTAINABILITY OF LAND USE

8. Chapter 2 presents and addresses the task of contributing to development of a methodology for assessing environmental sustainability of current land uses and management practices throughout the country.

9. **Why an assessment?** In Namibia, **the impact of the different land use types and management practices on environmental sustainability is presently not known.** Consequently **the most suitable land uses and management options in different eco-regions are currently not necessarily promoted and opportunities for introduction of informed and environmentally sustainable land use options are not being seized.** Based on research and assessment, environmental sustainability criteria can be developed and threshold values determined.

10. **How will it be undertaken?** Based on national and international experiences a design for a Namibian SLM monitoring scheme has been developed to be implemented under the CPP framework. The scheme is two-fold: (i) it comprises of a **scientific survey** that will be carried out by a team of researchers over a one and a half-year time period across the major eco-regions and land use or management types throughout Namibia, and (ii) **bottom up local level monitoring (LLM)** of natural resources and land management impacts through long-term LLM activities implemented through the CPP for ISLM umbrella programme and associated support projects.

11. The survey would apply an **ecosystem services focus**, i.e. focus on the benefits that humans obtain from ecosystems and ecosystem functions to improve and sustain their well-being. **Ecosystem services have an economic value, which can be estimated, and a human value in terms of health, well-being, sense of place and livelihoods.**

12. A **hierarchical design** is suggested, with collection of data of different intensity. The survey would include the assessment of SLM relevant data at 200 monitoring stations and 2000 monitoring locations. Data from local level LUP and LLM case studies (PESILUP/CPP; Chapter 6) will be linked to the national assessment.

13. It is proposed that a research team composed of an ecological analyst and a team of field technicians, supported by a technical advisory team carry out the national assessment.

14. Further, it is suggested that the assessment commences at the onset of the proposed interventions under the CPP framework. Other components (criteria, Chapter 5; toolkits, Chapter 6) will depend on the outcomes of the assessment, however should, to some extent be implemented in parallel. For example the participatory formulation of a criteria framework and the establishment of a good working relationship at pilot sites should be done at the same time.

15. **What are the key results?** Key outputs from the survey would be: (i) a **scientific report**, and (ii) a **policy maker summary**, informing about the suitability of different land uses and management practices in terms of environmental sustainability; (iii) **recommendation for SLM monitoring**; (iv) technical information feeding into the **development of environmental sustainability criteria** for Namibia (Chapter 5); and (v) technical information feeding into the **development of Namibian LUP toolkits** (Chapter 6).

16. **Who will use the results?** End users would be **local level land managers, traditional authorities, regional level extension staff, communal land boards, and national level policy and decision makers.** Especially the Land Use Planning and Allocation Division of the Ministry of Lands and Resettlement, staff responsible for resettlement programmes, and divisions at the Ministry of Environment and Tourism tasked with natural resources management and planning, and extension and planning staff at the Ministry of Agriculture, Water and Forestry are being targeted. Project staff and partners of the CPP for ISLM should be primary users of the products.

CHAPTER 3: POLICY ANALYSIS: MAINSTREAMING ENVIRONMENTAL SUSTAINABILITY INTO LAND MANAGEMENT PRACTICES

17. **Chapter 3** reviews and appraise the **prevailing policy environment** as well as the institutional arrangements and capacity to implement policy provisions. This review particularly focuses on and is thus restricted to those policies and associated institutions directly related to land and natural resource planning, allocation, access or user rights and management.

18. The most pertinent **finding** from the review of policy and policy instruments is the **overwhelming tendency amongst sectors to cluster the management of natural resource with overlapping parallel and vertical institutional arrangements** without necessarily demarcating mandates clearly. Most proposed new institutions are either not instituted or their members lacks an understanding of their roles, functions and mandates. This is in addition to financial, infrastructural and human resource gaps that plague such institutions. **The end results are capacity and institutional gaps to implement the SLM friendly policy/legal provisions.**

19. **Recommendations on policy revisions** are provided in order to streamline SLM into land related policies, programmes and institutional operations at all sectors at national and regional level. **In the short term, rapid assessments and evaluations, establishment of legally required bodies where they are non-existent and cessation of the creation of more institutions as well as the amalgamation of existing ones needs to be considered.** Ironing out of ambiguities in policies, explicit definition and demarcation of mandates and relations of institutions, translation of policies in local vernaculars as well as the scientific determination of eco-region specific land use options should be resolved in the long-term.

20. Specific entrance points for **mainstreaming environmental sustainability into** land use planning are given through the **Land Use Planning (LUP) Policy**, which is being re-drafted currently. Linking the policy revision to the outcomes and processes proposed in this report, environmental sustainability could be addressed systematically.

CHAPTER 4: LAND USE PLANNING (LUP) STAKEHOLDER AND POWER ANALYSIS: RIGHTS, RESPONSIBILITIES – INCENTIVES AND DISINCENTIVES FOR SLM

21. The analysis of stakeholders and prevailing power relations is important as a basis for the strategic planning of project interventions. Chapter 4 provides insights into who has stakes (rights, responsibilities and interests) in land and natural resources planning and management in Namibia, either as an established regulatory or decision-making body by law or as a user. Such an analysis should be continued and refined and ultimately become a standard practice in the preparation of various interventions.

22. In the Namibian context **two different contextual perspectives have to be realized: (1) land use planning is intractably interlinked with land tenure and tenure reform, and with sustainable land management relevant frameworks, and (2) the contextualization of power relations differs in (i) communal lands and on (ii) freehold properties.** Whereas decision making about land and natural resource use and management on a freehold property are relatively simple, understanding inter-community relationships is extremely important in communal areas.

23. Based on the analysis, **potential incentives for SLM are synthesised for government and local resource users.** It is recognised that potential trade-offs may occur introduced through planned CPP interventions and relevant responsive measures ought to be integrated into the intervention design.

CHAPTER 5: APPROACH TO DEVELOPING CRITERIA FOR ENVIRONMENTALLY SUSTAINABLE LAND MANAGEMENT IN NAMIBIA

24. Chapter 5 explicates the potential context, contents and approach for defining environmental sustainability criteria for land management practices in Namibia. It identifies the major levels of development planning in the country at which environmental sustainability criteria ought to be integrated as well as the guiding principles to underpin such integration.

25. ***Why is the development of environmental criteria critical?*** There are no set standards and thus **no unambiguous definition exist for SLM**, not in Namibia, and not in dryland elsewhere. As set out in Chapter 2, **there are no clear and accepted criteria according to which it could be determined whether a land use or land management practice is more or less environmentally sustainable**. Based on approved standards, principles and criteria for SLM guidelines can be developed directing (i) adaptive management and decision making by land users, (ii) development planning especially of larger scale schemes, and aiding (iii) the equitable valuation of land, and (iv) the identification of the environmentally most appropriate future land use i.e. on farms purchased by Government for resettlement purposes.

26. ***How will they be developed?*** The **national assessment (Chapter 2) will generate relevant scientific knowledge that will aid the systematic and unbiased development of criteria**, the identification of appropriate indicators and the establishment of baseline or threshold values for environmental sustainability of land use options in different eco-regions in Namibia.

27. Stakeholder consultations should be facilitated by any intervention under the CPP framework in parallel to the assessment to agree on the principles and criteria framework. Overall strong engagement of all stakeholders would need to be fostered to generate buy-in and agreement amongst the various interest groups. **A strong stakeholder participation plan** is needed for any intervention in this regard.

28. The national assessment will test the draft criteria and determine threshold values for environmental sustainability through the research. Examples of data sheets for potential impacts (positive/negative) and information matrices for criteria, indicators and verifiers for identified principles are conceptualised in the Chapter.

29. ***Who will use the outputs?*** Other than the policy level use, the criteria would have direct land management implications and SLM guidelines would be aimed directly for use by (i) **land managers**, (ii) **traditional authorities**, (iii) **land boards, regional councils, local authorities**, (iii) **planners and decision makers** in various line ministries, especially relating to agricultural and water resource planning (MAWF), (iv) the **EIA practitioner and legislator** (MET), and (v) staff at **MLR concerned with land valuation, allocation and resettlement**.

CHAPTER 6: LAND USE PLANNING (LUP) CAPACITY DEVELOPMENT FOR INTEGRATED SUSTAINABLE LAND MANAGEMENT (ISLM)

30. Chapter 6 lays the groundwork for the **development of a Namibian LUP toolkit for SLM at local and regional level as well as capacity building at institutional and individual levels**. Additionally the Chapter itemises the data and information available for integration and use in LUP toolkits, outlines the requisite layers of data for formal planning procedures and conceptualises the content for the proposed LUP toolkits. Proposals to guide the development of local, regional and national level capacity building plans with the stakeholders are included. It is specifically noted that such toolkits could serve the needs of resettlement farmers also.

31. ***Why is land use planning useful?*** Land use planning is a systematic process integrating information on existing natural resources, physical infrastructure, access to

markets into decision making **processes about the preferred land use and management** option applied by the land user or a group of users. It is mainly related to rural areas, concentrating on the use of the land in the broadest agricultural context (crop production, animal husbandry, forest management/silviculture, inland fisheries, safeguarding of protective vegetation and biodiversity values). **LUP provides the basis for choices and application of the best land use management practices for a given land use type in a distinct eco-regional/ecological and site specific setting. It demonstrates trade-offs between different options and facilitates the negotiation of different user aspirations. LUP is one step that contributes to achieving SLM.**

32. Who is involved in land use planning in Namibia? On the **regional and local levels**, decision making powers relevant to LUP and SLM are vested especially in the **Traditional Authorities and Communal Land Boards. Local users and farmers** take their own decisions, however have to conform to community rules and regulations set by Traditional Authorities. In Namibia it is observed, that local level land use decisions are often over-ruled by higher level decisions. In **Government**, it is the MAWF, MET, MLR, the Ministry of Local and regional Government and Housing and Rural Development (MLRGHRD) and the National Planning Commission holding land use and development planning related mandates.

33. What are current key constraints to LUP? There are **major capacity gaps relating to LUP in Namibia**. This has been identified at all levels. At the local level LUP skills need to be strengthened, and relevant information for meaningful planning has to be generated (e.g. through local level resource assessments, complemented with making available/provision of e.g. maps). **A major need is to empower local stakeholders to successfully negotiate land use decisions, especially if outside users/other uses impede on their “traditional” terrain. On the regional level** key land use decision making bodies, such as land boards, regional councils, and traditional authorities, **lack the technical background to LUP**. Certain needs are financial and hardware related rather than knowledge and skill related. Extension services (e.g. MAWF, MET (projects), NGOs) do lack the skills to facilitate the devolution of land and natural resource management decisions to the local level. At the **national level capacities in all relevant line ministries are low in view of LUP**. MLR, with the most explicit LUP mandate, for example is currently mainly focusing its activities on land acquisition and resettlement, without generating LUP capacities amongst land users, and there is insufficient integration of environmental considerations in MLR's LUP approach. It is recognised that the country-wide rolling out and up-scaling of successful approaches is needed, however remains a serious challenge.

34. How can LUP capacities in Namibia be improved? Relevant **information underpinning decision making has to be available**. There is some information in form of maps, regional profiles, and some GIS databases; specific information on environmental sustainability of land uses in Namibia will be made available through the national assessment (Chapter 2). Additional local level information ought to be generated locally. Land users have to be trained in collecting local data and observing LUP and land management relevant parameters. **Procedures for using such information in a planning context need to be communicated, and general skills to access new information and technologies** ought to be strengthened. Identified capacity needs for regional decision makers are similar to those of the land manager, although focusing on a broader scale. It is recommended that a specific CPP intervention such as PESILUP focus on (i) the **development and testing of Namibian LUP toolkits**, and (ii) **promote the application and use of the toolkit intense capacity building support interventions**. It is recommended further that PESILUP focus its work in a relatively narrow set of pilot areas, whilst systematic up-scaling and rolling-out of the approach will commence over a much longer time period in the scope of the CPP for ISLM. A key strategy is that the toolkits and the capacity building approach will be internalised by the various line ministries and other organisations with a LUP mandate.

CHAPTER 7: FINDINGS AND RECOMMENDATIONS

35. **Chapter 7** synthesises the key findings from the report and brings together recommendations from it. It formulates a set of key messages that link the various findings and recommendations from the separate chapters (section A) and pulls together the overall framework for priority actions for promoting environmental sustainability in SLM through improved LUP (section B).

36. The **key messages are formulated as policy statements** are: (1) Improved land use planning is key to integrated sustainable land management; (2) Environmental sustainability considerations are not currently systematically addressed in land use planning procedures and processes in Namibia; (3) The enabling environment needs to be further strengthened to leverage visible ISLM impacts, including of LUP; (4) Capacity gaps for ISLM and LUP at all levels, local, regional and national, exist and need to be addressed as a matter of urgency; (5) Incentives for SLM exist for various important stakeholder groups and new and additional ones should be developed; (6) Project interventions under the CPP for ISLM need to focus on the demonstration of real impacts/ improvement of environmental sustainability and ultimately livelihood improvements.

37. National **priority interventions to address the key issues fall under three main areas, (a) enabling environment, (b) knowledge generation, and (c) tools, implementation and capacity**. Innovative proposals of how the GRN, under the CPP for ISLM umbrella can make significant contributions to national development are summarised.

38. It has been proposed that the **key findings become part of a policy briefing, which should be widely disseminated amongst key decision makers in Namibia**. Parliamentarians, other policy makers and technical personnel in line ministries and relevant non-government institutions should be the primary targets of such briefing.

SECTION A: Main Report

Foreword

The World Bank commissioned this present study as a contribution to its on-going environmental country dialogue and Namibia's Country Pilot Partnership (CPP) for Integrated Sustainable Land Management (ISLM)¹. The Namibian CPP is the first programme of its kind and presents a global case study for Global Environment Facility (GEF) support under its Operational Programme (OP) 15. The commissioned study aims to provide technical background and strategic input into the development of interventions under this emerging country umbrella programme, contributing to the overall goal of sustainable land management.

The specific tasks of this assignment as set out in the TORs (Appendix B) were to (1) review and provide inputs into the refinement of an environmental sustainability assessment methodology, (2) facilitate and maintain relevant stakeholder consultations, (3) feed into the review and provide detailed analysis of the current policy and legal framework and related action programmes in view of identifying barriers, gaps, conflicts and opportunities for enabling the strengthening and mainstreaming of environmental sustainability into land management practices, (4) explore (a) the content and approach to developing environmental sustainability criteria for land management practices, (b) the outline of a M&E toolkit facilitating the mainstreaming of environmental sustainability considerations into land management practices. The work was commissioned as technical review work, which would make proposals for operationalisation under the CPP for ISLM and related projects. Specific reference is made to the Promoting Environmental Sustainability through Improved Land Use Planning (PESILUP) project, a MSP under the CPP, due to its similar thematic focus.

The work is presented in a main document organised into seven chapters, preceded by an Executive Summary, which can be read as stand alone product. More detailed materials substantiating the main text are included in appendices as per each chapter and are available on the CD inserted in the back cover of this report.

¹ Four ministries together with the National Planning Commission (NPC) are spearheading the partnership with Global Environment Facility (GEF). These include the Ministry of Agriculture, Water and Forestry (MAWF), Ministry of Environment and Tourism (MET), Ministry of Lands and Resettlement (MLR) and Ministry of Regional and Local Government and Housing and Rural Development (MLGHRD). Their combined actions are being coordinated through the CPP and the planned WB/GEF Promoting Environmental Sustainability through Improved Land Use Planning (PESILUP) Medium-Size Project, into which this report should feed.

Chapter 1

1 Theoretical and Conceptual Background to SLM and its Relevance in the Namibian Context

Box 1: Key sections of Chapter 1

The Chapter is organized into four key sections, substantiated by Appendix D:

Section 1.1 provides a basic country overview and outlines the SLM problematic in Namibia;

Section 1.2 presents the conceptual framework of the issues at hand and gives definitions for some of the key concepts examined in this report such as for land use planning, land reform, land management and environmental sustainability;

Section 1.3 describes the current roles and mandates pertaining to land use planning in Namibia and identifies critical gaps;

Section 1.4 finally identifies a framework for potential SLM interventions and describes the Namibian Country Pilot Partnership (CPP) for Integrated Sustainable Land Management (ISLM). The conceptual framework for this particular study is presented. Overall Chapter 1 aims to lay out the roadmap for the remainder of the report, which is mainly embedded in the conceptual framework offered.

1.1 NAMIBIA

39. Namibia is a young democracy, which gained Independence from then apartheid South African rule in 1990. Situated on the south-western coast of Africa, Namibia is characterized by hyper-arid to dry-sub-humid climatic conditions and with below two million people, is one of the least populated countries in the world. Namibia has one of the highest Gini coefficients world-wide registered at 0.7 % (UNDP, 2005), marking a sizeable gap between a wealthy minority and a poor majority. The divide between rich and poor is often underlined by differential opportunities for and access to food, education, health, housing and security. Social divide was exacerbated during apartheid rule, strongly reflected in the current setting of land tenure arrangements and land reform efforts in Namibia, and very important to sustainable land management considerations in this country.

40. Due to the low agricultural productivity of the country limited by low and erratic rainfall, scarce ground and surface water resources, less than 5% of Namibia is considered fit for arable agriculture, including through irrigation. This means that only 816 000 ha out of a total landmass of 82 329 000 ha is arable, situated primarily in the north-eastern parts of Namibia, with the highest annual rainfall and most suitable soils for agricultural usage. Namibia's formal and informal economies are highly dependent on the natural resource base, mainly livestock farming and more recently, larger scale game utilization, fishing, wildlife and nature tourism². Subsistence farming supports the livelihoods of the vast majority of rural Namibians, approximately 70% of the total population. Namibia's population growth rate is currently estimated at rates as low as 1.25% per annum having plummeted from 3.2% in 1990 largely due to the impact of HIV/Aids pandemic.

41. There are no natural perennial watercourses within the borders of the country. Water is a limiting factor both in terms of availability and quality for human use as well as for the maintenance of ecosystem services. Rainfall is relatively low, highly variable and droughts are a normal and common occurrence. Arid environments are adapted to recurring droughts, but their resilience and recovery can be impaired by human-induced mismanagement resulting in a steady decline in productivity, thus by definition, desertification. One of the main challenges facing Namibia is to maintain and improve its natural assets (e.g. of economic relevance for the tourism sector, production of quality meat and fish, and, to some extent, medicinal plant

² Although Namibia is the most arid country in sub-Saharan Africa, it is known for its highly diverse ecosystems and species (Barnard, 1998).

harvesting³) and to avoid any risks that could jeopardize sound economic development within the given limits set by the natural resource base and environment. This is important in terms of subsistence and commercial farming.

42. Namibia's national and local economic development is heavily reliant the exploitation of the natural resource base for employment, subsistence farming and exports. The agricultural sector is the largest employer in Namibia accounting for 46% of all jobs in the country. As a country, Namibia generates 11.3 % of its GDP from land based products through agriculture (NID, 2004). While only contributing about 1.6 % to the GDP (Appendix D) subsistence farming supports more than two thirds of the entire population while a quarter of the entire employed population works in the 'natural resource sector' comprising agriculture, hunting, forestry and fishing. A total number of 597 869 people in Namibia (NPC, 2003) cite farming as their main source of income. Developing national wealth requires that the natural capital be transformed into other forms of capital. However, economic growth is often pursued and achieved at the expense of the natural capital, i.e. through resource degradation, without adequate provision for replacement of these assets for future generations. There is a lack of economic alternatives and limited/no legal access to and use/benefits of natural resources for rural populations especially those currently living on communal lands in Namibia. An increasing divide between a large majority of rural poor (on communal land) and the rest of the population is visible, with resultant dependency on donor support and food aid programs due to resource degradation and external vulnerability in some of the rural regions.

43. Land and resource degradation, and consequently potential loss of productivity, has been identified as a key threat to Namibia (Quan et al., 1994; Krugmann, 2001; MET, 2005). The main immediate impacts include groundwater depletion, soil erosion, declining land productivity and loss of woody vegetation, shrub and ground cover. Open access, habitat conversion and over-exploitation of resources are amongst the main suspected causes. Bush encroachment (de Klerk, 2004), for example, alone is approximated to affect 26 million ha of savanna and woodland areas throughout Namibia (16 million ha affected are on freehold land). Land productivity, especially in terms of cattle ranching is believed to have declined significantly in certain land areas due to bush encroachment. It is asserted that the application of more sustainable land management practices would benefit people living in rural areas, especially farmers and users of other natural resources. Improved land management would potentially prevent land degradation and productivity would be maintained or enhanced. Land degradation and other environmental threats such as extreme seasonal flooding or droughts, partially potentially linked to long-term impacts of climate change and other, can lead to disaster situations in a country such as Namibia, and already have done so. Thus disaster management is an issue of great importance to development and sustainability. The issue of increased urbanization e.g. due to environmental pressures exerted on the land and the people is a major concern and would need to be considered more prominently.

44. It is widely recognized that the policy framework, including its implementation instruments (i.e. laws and regulations, strategies, programme and project interventions, and institution building in support of policy implementation), is key to facilitating or hampering sustainable land management (SLM), not only in Namibia. Since Independence and especially over the past decade policy development in Namibia has been rapid and intense. There is reason to call for a more systematic analysis of the existing and newly developed policy framework, to clearly identify areas that are enabling or disabling environmental sustainability aspects of SLM. Building on an earlier study carried out under Namibia's National Programme to Combat Desertification (Nacod) (Dewdney, 1996), a limited review was undertaken as part of this assignment. A focus of Government is on enacting land reform provisions, which have been put into place to overcome some of the apartheid past inequalities, but also as one tool for broad based development. One tool applied in Namibia has been the introduction of land tax to finance elements of the national land reform programme. Robust, just and reliable land

³ Including the use of indigenous plants such as **Devils Claw** (*Harpagophytum*), **Marula tree** (*Sclerocarya birrea* subsp. *caffra*), **!Nara** (*Acanthosicyos horridus* (*Cucurbitaceae*)), and the **Hoodia** (*Hoodia goormi*), currently used locally and internationally for medicinal, cosmetic and other uses. Besides the commercial export value of *Harpagophytum* (up to US\$ 2 million in 1998 according to a MET/FAO report), their net (local and national) economic contribution is currently not known.

valuation has to take place to guarantee that the land tax system and other elements of land reform such as the purchasing of land and appropriation of farms can have a solid foundation. The MLR has undertaken much work in this regard.

45. One key issue critical to sustainable land management and land reform is that currently it is largely unclear what the effects are of various land-uses on environmental sustainability per se. From a rigorous scientific perspective, this assertion on the understanding of the impacts of different land use types on environmental sustainability can apply for most of Africa. Consequently, it cannot be stated with certainty which and how land management practices would impact on environmental sustainability, positively or negatively. It needs to be understood that the maintenance of Namibia's unique natural resource base and the sustainable use thereof is of the greatest importance to the functioning of productive ecosystems e.g. measured through agricultural and ecosystem productivity. The identification and broad-scale and adaptive application of sustainable land management practices is essential to sustained growth in dryland Namibia. Damage has been done through the promotion and application of inappropriate practices in the past, as demonstrated for the bush-encroachment example above (de Klerk, 2004), and developmental opportunities may have been lost by not exploring environmentally sustainable land use options (e.g. Dewdney, 1996; de Klerk, 2004). Thus the assessment of environmental sustainability of land uses in Namibia, elaborated on in Chapter 2, is an opportune initiative, and should be a priority for action.

46. It is inconceivable to arrive at complete understanding of the causative impact land use and management types have on environmental sustainability within a life span of any project. This becomes especially difficult in the absence of quantitative baselines for comparative evaluations of before and after conditions. Any assessment could thus, only focus on retrospective analysis, combining quantitative measurements with subjective opinion whilst allowing for continual diagnostic-interventions as more information feeds into the process.

47. Addressing the land question in the context of promoting responsible growth will need to consider the environmental limitations and opportunities the dryland context provides.

1.2 CONCEPTUAL FRAMEWORK AND DEFINITIONS

1.2.1 Sustainability and sustainable development

48. Appendix D elaborates on the terminology and key concepts within the sustainable development and the SLM paradigms by providing more detailed definitions of the underlying concepts and clarifying their usage in the context of this report.

49. In its crudest meaning sustainability may be taken to entail the ability of a system or process to continually function and deliver benefits without compromising or endangering its future ability to continue functioning and delivering benefits. Sustainability is essentially conceptualised from an anthropological developmental perspective in that it is people, through intensified use of resources, who derive the accruing benefits of a sustainable system or process. To eke out a livelihood, humans consume natural resources produced by the environment and for such consumption to be sustainable and maintain the environment's capacity to support human populations, it should not surpass the rate at which the environment generates those resources.

50. **The three common aspects of sustainable development involve social progress, health of the environment and economic growth** (Figure 1). Sustainable development is about maintaining a delicate equilibrium between human desire to better the quality of life and sense of well-being against safeguarding natural resources and ecosystems for future generations through the maintenance of harmony between the environment, society and the economy. However, the sustainability of each of these components needs to be secured in its own right if overall sustainability of development is to be accomplished. Indeed, it has become dogma in many UN texts including the recent 2005 World Summit Outcome

Document, to refer to economic development, social development, and environmental protection as the "interdependent and mutually reinforcing pillars" of sustainable development.



Figure 1: Components of sustainability also referred to as the three pillars of sustainable development

51. In the context of this study it is recognised that sustainability is dependent on these three pillars, however the special focus of the deliberations is on "environmental sustainability".

1.2.2 Sustainable Land Management (SLM)

The SLM Concept and Objectives

52. The concept of sustainable land management (SLM) has been elaborated since the early 1990s (Smyth & Dumanski, 1993) and defined in the context of the Framework for Evaluation of Sustainable Land Management (FESLM) as "the combination of policies and activities aimed at integrating socio-economic principles with environmental concerns so as to simultaneously:

- » maintain or enhance productivity/services;
- » reduce the level of production risk;
- » protect the potential of natural resources and prevent degradation of soil and water quality;
- » be economically viable;
- » be socially acceptable."

53. Shanthikumar (2002) considers it as 'the protection and exploitation of land resources to meet the present material, aesthetic and spiritual needs of humankind while ensuring the productive potential as well as the environmental functions of such natural resources into the future'. In simple terms, SLM refers to the use of pastures, soils, plants, water, minerals and animals to produce or procure food, fodder, fuels, construction material as well as other goods and services in accordance with human needs while not disrupting the long-term productive potential or environmental functions of such resources.

54. Based on the afore references, the objective of SLM is to harmonize the complementary goals of providing environmental, economic and social opportunities for present and future generations, while maintaining and enhancing the quality of land (soil, water and air) resources. SLM is the use of land to meet changing human needs (agriculture, forestry,

conservation), while ensuring long-term socio-economic and ecological functions (Dumanski & Pieri, 2001).

55. SLM concepts are currently being reviewed and updated in view of the new impetus of the SLM focus by the GEF and ongoing CCD work and associated support through GEF. The GEF definition of land degradation reads "... any form of deterioration of the natural potential of land that affects ecosystem integrity either in terms of reducing its sustainable ecological productivity or in terms of its native biological richness and maintenance of resilience⁴." And the objective of the Operational Program on Sustainable Land Management (OP#15)⁵ is "to mitigate the causes and negative impacts of land degradation on the structure and functional integrity of ecosystems through sustainable land management practices as a contribution to improving people's livelihoods and economic well-being".

56. The expected outcomes of GEF-supported activities on sustainable land management include the following:

- (a) Institutional and human resource capacity is strengthened to improve sustainable land management planning and implementation to achieve global environment benefits within the context of sustainable development.
- (b) The policy, regulatory, and economic incentive framework is strengthened to facilitate wider adoption of sustainable land management practices across sectors as a country addresses multiple demands on land resources for economic activities, preservation of the structure and functional integrity of ecosystems, and other activities.
- (c) Improvement in the economic productivity of land under sustainable management and the preservation or restoration of the structure and functional integrity of ecosystems.

Box 2: Sustainable Land Management

"A system of technologies and/or planning that aims to integrate ecological with socio-economic and political principles in the management of land for agricultural and other purposes to achieve intra- and intergenerational equity"

Smyth & Dumaski, (1993); Hurni, (1997)

1.2.3 Land use Planning (LUP)

57. Land use planning is a means of ensuring SLM and securing land functions for the benefit of present and future communities. Internationally it is defined to be a decision-making process that "facilitates the allocation of land to the uses that provide the greatest sustainable benefits" (Agenda 21, paragraph 10.5 in UNCED, 1992) (Chapter 6).

58. Generally, LUP is based on the socio-economic conditions and expected developments of the people in and around a natural land unit. These are theoretically matched through a multiple goal analysis and assessment of the intrinsic value of the various environmental and natural resources of the land unit. However, such a complex formal approach may not always be permissible at a local level in rural areas and a rough approximation of land and natural resource value by local users may suffice. The result is an indication of a preferred future land use, or combination of uses. Through a negotiation process with all stakeholders, decisions are arrived at concerning concrete allocation of land for specific uses (or non-uses), which will eventually lead to implementation of the lands use plan. It is essential to undertake land use planning in the context of which uses would be environmentally acceptable and sustainable. In drylands, constituted by terrestrial parts of the world with mean annual precipitation in all its forms (rainfall, snow, hail or fog) lower than the amount of water lost to

⁴ GEF 1999. Report of the STAP Expert Group Workshop on Land Degradation (GEF/C.14/Inf. 15)

⁵ GEF, 2003. Operational Program on Sustainable Land Management (OP#15).

the atmosphere through evaporation and transpiration annually (IUCN), it may have to be considered that there are natural limits to what uses of land are feasible.

59. Land use planning is mainly related to rural areas, concentrating on the use of the land in the broadest agricultural context (crop production, animal husbandry, forest management/silviculture, inland fisheries, safeguarding of protective vegetation and biodiversity values). However, peri-urban areas are also included where they directly impinge on rural areas, through expansion of building construction onto valuable agricultural land and the consequent modification of land uses in the adjoining rural areas.

60. This report regards and recognizes LUP as inclusive of the physical planning and designing of the optimal physical infrastructure of an administrative land unit, however, it confines itself to non-physical land use planning around agricultural land. Further, large-scale private sector or government developments e.g. as pertaining to mining, irrigation and infrastructure (dams a.o.) are recognised to be important to land use planning at regional scales or when planning or negotiating parallel local uses, however are not the main focus of this report.

61. A more detailed review of land use planning mandates and processes currently underway in Namibia is provided under 1.3 and especially in Chapter 6.

1.2.4 Land tenure and land reform (LR)

62. Land tenure arrangements are key to SLM and LUP, and influence decision making on all levels (see Chapters 4, elements of 3). As Namibia has inherited colonial and apartheid driven settings of land ownership and management rights and responsibilities, since Independence in 1990 efforts are being made in Namibia to reverse unjust and unproductive frame conditions and engage in an enabling land reform process.

63. Historically, land reform is a targeted government driven re-arrangement of land ownership and usage, encompassing access and tenure rights, with the explicit aim of freeing mostly agricultural land from the ownership of a few rich minority and making it available to the majority of poor rural dwellers. In other instances the reformation of land was motivated by philosophical underpinning that consider land to be a common good that should not be owned privately. George (1965) contents that skewed ownership and control over land by a tiny minority to the exclusion of the majority is the 'the most pressing cause of abject poverty' endured by millions of people in the world. Reformation of land distribution is thus a means of bringing about fair and equitable access and ownership of land and means of production. Contemporary thinking considers land reform as a means of vesting ownership and thus decision-making as well as managerial powers with the people who use the land and are directly dependant on land resources for their livelihoods to ensure sustainable usage.

64. Land reform is almost exclusively undertaken at policy level, as it requires the re-evaluation and transformation of property laws, laws governing access and tenure rights, regulations and customary practices concerning land ownership and use. Not only do laws that restrict access to and use of land need to be repealed, but also they need to be replaced with legislation that actively promote reformation of the land sector and ensure that the beneficiaries of land reform enjoy the economic rewards of the process. In Namibia, the entire process of land reformation has exclusively been pursued by the MLR with almost no input from key natural resource management ministries such as a MAWF and MET.

65. Land tenure is amongst the most important components of any land use or farming system. The institutional arrangements under which a person gains access to land largely determine, among other things, what crops he/she can grow, how long he/she can till a particular piece of land, the rights over the fruits of his/her labour and his/her ability to undertake long term improvements on the land. These basic particulars of land use are at the heart of rural development with relevance to management, control and rights to land and natural resources. The system of tenure which control user rights over land and natural resources together with the policies that enable or constrain secure access to land as a

livelihood resource for rural people (Toulmin and Quan, 2000) is pivotal to the reform of land management practices ought to be addressed through LUP capacity building processes (Chapter 6).

1.2.5 Land reform in Namibia

66. In adopting a willing-buyer/willing-seller approach either through constitutional guarantees that protect property rights, Namibia committed to employing public funds to compensate settlers at market prices (Adams, 2000) in order to transfer land for free to the landless. The economic and administrative realities of such an approach is that it is cumbersome, expensive to the state, allows for inflation of land prices and does not always ensure the availability of the best land areas for redistribution. Few 'willing sellers' will voluntarily part with a profitable farm, meaning that only those farms that are non-viable as economic entities are more likely to be offered to the willing buyer. It is thus more probable for poor rural farmers to be resettled on marginal land instead of prime agricultural land. A weak economic base for majority of land reform beneficiaries together with inadequate or absent training, support services and subsidies to newly resettled farmers, is liable to result in unsustainable land use practises on resettlement projects. A critical need could therefore be triggered by land reform exercises for SLM through appropriate application of an integrated land use planning tool.

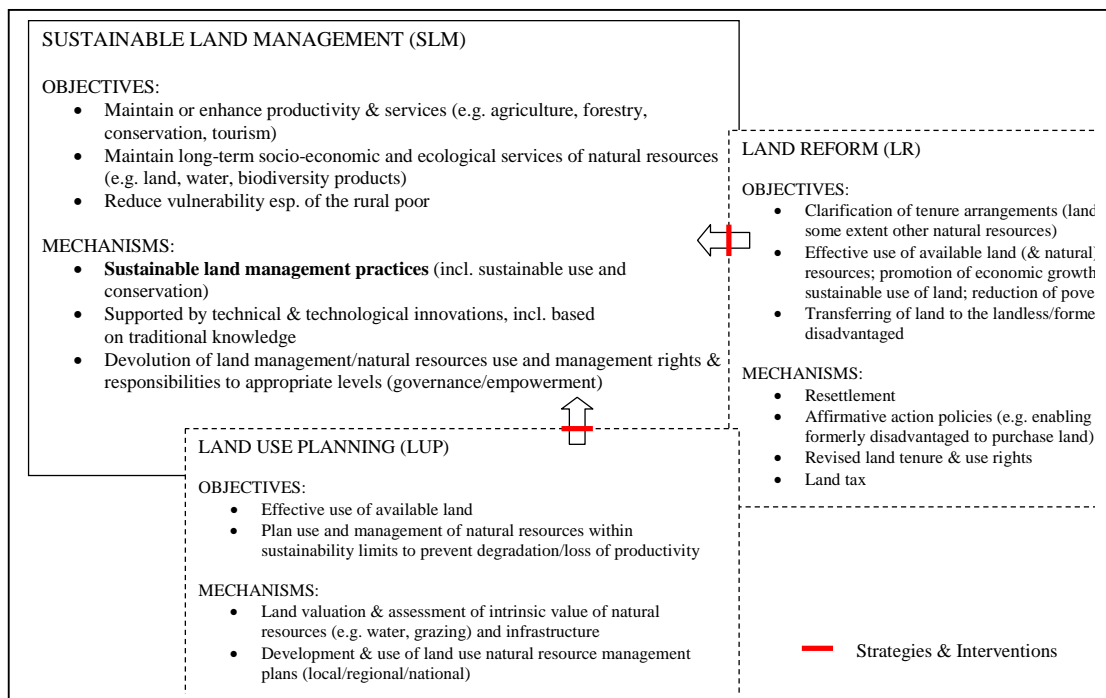


Figure 2: Processes in Land Use Planning, Land Reform and how they feed into SLM. Improved land use planning processes can inform land reform decisions and can contribute to SLM. Thus this report identifies improved LUP at all levels as a key to the intervention strategies of Namibia's Country Pilot Partnership for Integrated Sustainable Land Management (CPP for ISLM).

67. The Namibian land reformation exercise is predominantly part and parcel of an overall effort to address gross inequalities inherited by the Namibian government with independence and redistribution of wealth. Land reform does however also afford the government the opportunity to incorporate and mainstream prudent land use planning through ILUP and SLM to promote economic growth and encourage sustainable land use practises. The ILUP toolkits developed in the course of this study will be appropriate and valuable in guaranteeing SLM approaches and the successful administration of land reform throughout the planning and implementation processes. Further it would support the MLR in developing tools that would help them fulfil their mandates of effecting successful land use planning and management on various levels. Other relevant technical work has been carried out by the Permanent

Technical Team (PTT) on land reform and a detailed report with support information and recommendations in support of land reform decision-making was published by MLR in 2005 (MLR, 2005). Alternative land use models are explored in some detail (Chapter/Section 6). Currently a number of studies are underway to further establish the economic viability of current land uses and of land reform (NPC, pers. comm.).

68. Three modalities of land reform/resettlement are practiced; (i) redistribution to the landless, (ii) subsidised acquisition of farmland by emerging black farmers and (iii) establishment of resettlement projects in communal areas. The redistribution targets largely white-owned private farms held under freehold tenure to black farmers or landless unemployed rural poor as well as the reformation of tenure arrangements in communal areas. Two schools of thought have largely informed the debate about land reform in Namibia. Proponents of land reform as a tool to address historical and socio-economic justice and equality are pitted against those who advocate for the process to be geared towards increased productivity of the agricultural sector. SLM paradigm would indicate that these two lines of thinking need not necessarily be antagonistic since sustainable land management is geared towards the complementarities of increased productivity, environmental protection and reduced production risks in an economically viable and socially acceptable manner.

1.3 CURRENT STATUS OF LAND USE PLANNING IN NAMIBIA

69. In Namibia, overall development planning including planning of land and other natural resources⁶ is vested in a number of different government institutions.

70. The Ministry of Local and Regional Government and Housing and Rural Development (MLRGHRD) is primarily responsible for the decentralisation of government, and supports the Regional Councils in planning and carrying out of government activities. Regional development planning is the responsibility of this ministry. The responsibility for land use planning is primarily vested with the Ministry of Lands and Resettlement (MLR). The Land Use Planning and Allocation Division (LUPA) within this ministry is tasked, amongst other, with the production of national and regional land use and development plans and its current primary focus is land reform, land acquisition and allocation. Extension work by the LUPA gives low priority to local level planning mandates. The Ministry maintains other for land use planning relevant structures, such as the Deeds Office and the Surveyor Generals' Office, as well as specific divisions are tasked with land reform and resettlement. It is recognised that all these structures are concerned with land use planning, however, the major part of the review in this study focuses on LUPA. Other Ministries with strong and established institutional set-ups for extension work such as the Ministry of Agriculture, Water and Forestry (MAWF) and the Ministry of Environment and Tourism (MET), lend concrete support to the devolution of natural resources or land use planning and management to the local level, primarily through project based interventions, often carried out in collaboration with NGOs and development partners. These interventions are designed to help communities develop their own plans in certain cases, and empower them to carry out local level land and natural use planning and management, in line with policy guidelines supporting the devolution of natural resources management rights and responsibilities to the lowest appropriate level.

⁶ This Chapter on land use planning does not explicitly address infrastructure planning, although it is recognized that such planning has important linkages and implications for sustainable land management.

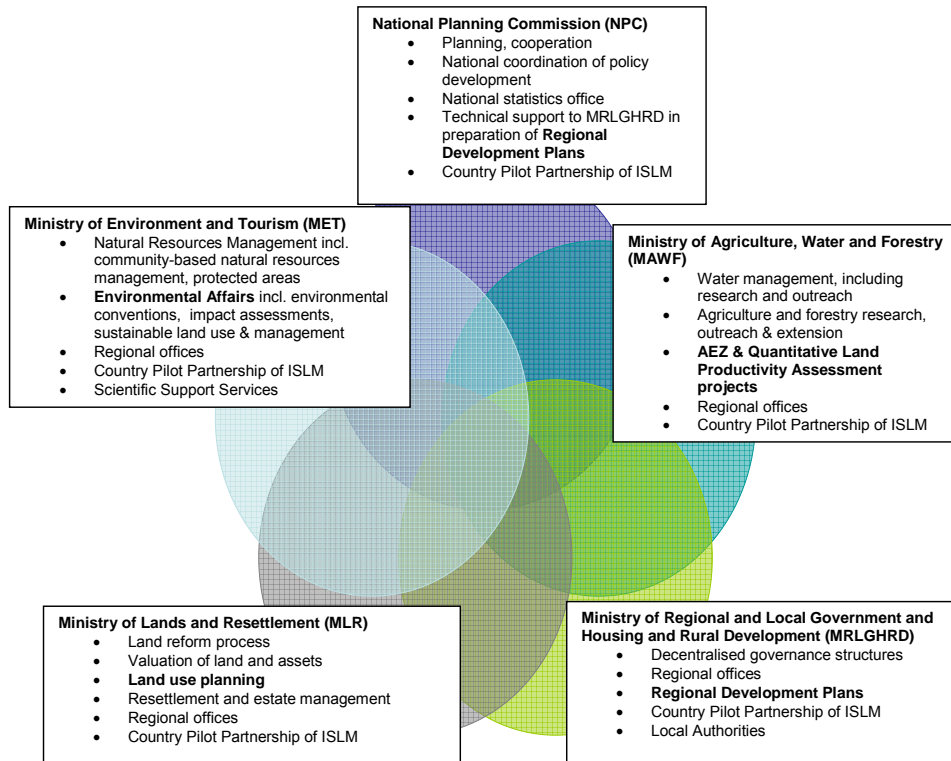


Figure 3: Key line Ministries responsible for planning aspects relevant to SLM, LUP and land reform in Namibia. All these Ministries are members of the Governing Body of Namibia's Country Pilot Partnership (CPP) for Integrated Sustainable Land Management (ISLM).

71. Conflicting mandates are apparent amongst the different Ministries as epitomised by the various organisations established through sectoral policies at local level such as conservancy committees (MET), water point committees (MAWF), community forestry committees (MAWF) and village development committees (MRLGHRD) tasked with local level planning.

72. Table 1 provides an analytical overview of ongoing planning activities at the local, regional and national levels, with an emphasis on land use planning. Constraints may emanate from conflicting or overlapping mandates amongst the different Ministries and associated lines of command are evident from Table 1, however the diversity of actions and responsibilities, if well managed and coordinated can also be of advantage. Some obstacles to effective and appropriate planning are apparent. An illustrative example is that currently local level plans developed by conservancy committees supported by MET are subordinate to and can be "overridden" by regional land plans developed by MLR. Some potential key interventions which could help overcome identified constraints and challenges are indicated in the table. These recommendations can form a framework for a strategic approach to integrated land use planning in Namibia.

Table 1: Constraints and key challenges to ongoing land use planning activities at different levels of government and possible interventions

Stakeholder Level	Ongoing Planning	Key Constraints/Challenges	Recommended Interventions	Existing and planned support structures
Local level: Traditional authorities, various CBNRM approaches, conservancy committees, community forest committees, village committees, farmers associations (sub-regional), water management committees	Land use plans	Not recognized by high structures of governance MLR does not recognise local level LUP responsibilities	Develop capacity development plan for LUP for ISLM	CPP, PESILUP, CALLC, ICEMA, other CBNRM interventions e.g spearheaded by MET, IRDNC, WWF, USAID, NACOBTA, NACSO, FIRMS
	NR management plans	Lack of skills and knowledge for ILUP and SLM	Contribute to role clarification of LUP stakeholders (incl. MLR) and coordination of activities	
	Community development plans	Need for wider application of ILUP	Develop locally/regionally adapted tool kits; tailor tool kit content to locally identified information needs (participatory assessments)	
	Tourism development plans	No unified approaches (i.e. guaranteeing environmental sustainability); often sectoral Lack of tools Lack of investment Need for application of ecosystem approaches	Develop targeted interactive training packages, integrated into broader ISLM framework	
			Develop LUP environmental criteria and SLM guidelines	
		Facilitate peer interaction		
		Facilitate policy adaptations and changes		
Regional level: Regional councils, land boards, extension staff of MLR, MAWF, MET, farmers associations (regional)	Regional Development Plans	Capacity bottlenecks in implementation of plans	Contribute to role clarification of LUP stakeholders (including local level land users) and coordination of activities eLUP environmental criteria and SLM guidelines	EU
		Quality of plans often poor		
		Inadequate stakeholder consultation in development process		
	Regional ILUPs (e.g. coastal zone development plan; tourism development plans)	No systematic addressing of environmental sustainability; no guidelines or criteria	Develop needs based LUP/SLM capacity development plan based on assessment findings	PESILUP, CPP, MLR
		Lack of enforcement of plans		
		Low of recognition by other line ministries		
	Thematic, regional data bases, maps, profiles	Lack of coordination and conflicts of interest	Develop regionally/locally adapted tool kits	GTZ, NCSA (UNDP/GEF), AEZ, previous support e.g. Atlas, existing regional profiles
	Environmental management plans and EIAs	No clear definition of mandates/responsibilities of regional bodies; overlaps	Develop and implement targeted interactive training packages, incl. "Training-of trainers" modules for extension officers (government and non-government)	Various developers, MME, MET, SAIEA
		Unclear legal framework, EMA Bill not enacted		
	Communal area development plans	Lack of information and tools	Facilitate policy adaptations and changes, review modus operandi; support enabling environment	MLR
Need for application of ecosystem approaches				
Detached from local level planning; often LUP conflicts				
National level: MLR, MAWF, MET,	Development plans	Quality of plans often poor, if at all prepared	Agree to a definition of environmental sustainability in Namibian LUP context; develop and agree to environmental	MLR

MRLGHRD, NPC, EMAA commission for sustainable development, NGOs, Service Organizations, other	ILUPs	Quality of plans often poor, if at all prepared	criteria and SLM guidelines; support enabling environment	
		Lack of systematic M&E of these plans to get reliable information about what worked and what not and what needs to be improved		
	Land reform plans (incl. resettlement)	No systematic addressing of environmental sustainability ; no guidelines or criteria	Mainstream environmental sustainability criteria into policy (esp. LUP policy)	MLR, AEZ
	Agricultural development plans (e.g. Greenplan project; Farm Aussenkehr)	Political considerations often override environmental considerations; need to improve understanding for environmental sustainability	Undertake scientifically sound assessment of LUP impacts and options	MAWF, AEZ
	Tourism development plans	Lack of information and tools	Integrate information into decision making tools (tool kits)	MET, SPAN, Namibia Tourism Development Programme (NTDP)
Conservation area plans	Capacity bottlenecks for planning, implementation and devolution of activities to regions Need for application of ecosystem approaches	Create awareness about inter-linkages between bottom-up and top-down planning through implementation of capacity building plans	MET, SPAN	

* Various levels of stakeholders are involved in ILUP. Different types of key constraints and challenges are met at each of these levels. Recommendations of how PESILUP and CPP could help overcome such constraints and challenges, leading to environmentally more sustainable land and resource management are summarized

1.4 IDENTIFYING SLM INTERVENTIONS

73. It is of utmost importance that land policy and land rights are human-centred and less driven by economic prescription to ensure even-handedness in relation to various stakeholders, particularly the poor. This requires a fundamental recognition that western notions of property rights are not the only principles that may be appropriate in Africa. Although there is a notion that in many cases governments remain unwilling to hand over property rights to community groups, or private individuals, because of the loss of power and patronage this would imply (Toulmin & Quan, 2000.), it is apparent that much of Namibia's new and emerging legislation set out to devolve such rights to a community level (although often refraining from private ownership to protect community rights) as is evident in Chapter 3.

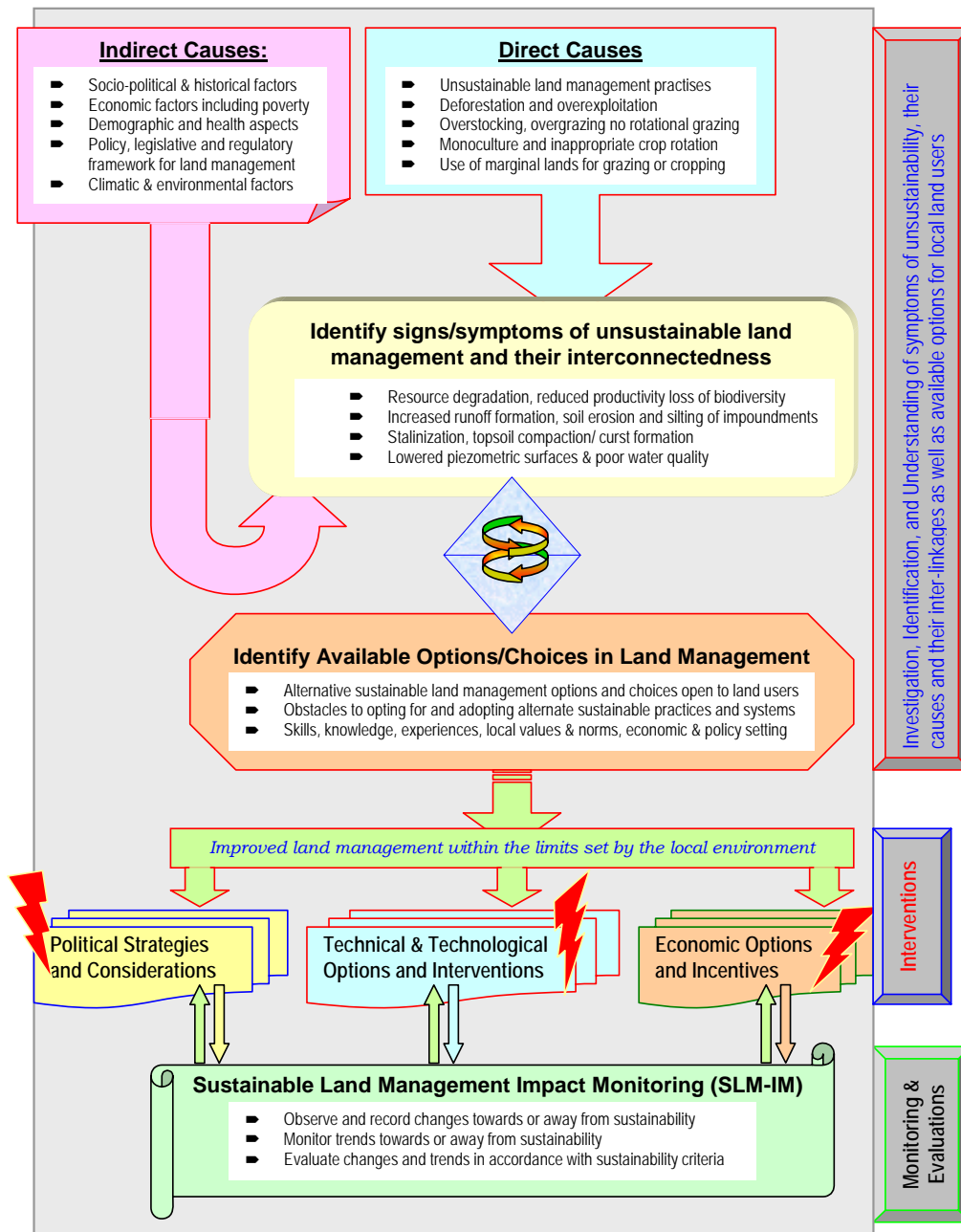


Figure 4: Processes and activities in SLM. A framework for planning targeted interventions such as the Namibian CPP for ISLM and for example the proposed PESILUP project.

74. Thorough insight and appreciation of a particular society within its specific local environment are required in order to identify suited activities or corrective measures that will contribute to SLM. This can be approached from either looking at signs of unsustainable land management or identifying the choices and options open to land users to effect SLM (Figure 4).

1.4.1 The Namibian CCP for ISLM

75. Building on a decade of experiences of Namibia's National Programme to Combat Desertification (Napcod), new interventions addressing the urgent needs in terms of improving SLM in Namibia (see section 1.1.) have been developed. In November 2005, the Council of the Global Environment Facility (GEF) approved funding for Namibia's Country Pilot Partnership (CPP) for Integrated Sustainable Land Management (ISLM). The CPP is a country framework for SLM interventions, under the Operational Programme 15 on SLM. The CPP in Namibia is spearheaded by UNDP/GEF, and provides a platform for donor and development partner coordination for relevant interventions. This report is designed as a contribution by the World Bank/GEF to the strategic development of the CPP.

76. The CPP framework identifies an overall goal "The integrity of livelihoods is assured through Integrated Sustainable Land Management which underpins economic development working towards Namibia's Millennium Development Goals #7: ensuring environmental sustainability". Further two key objectives and related sets of outcomes and outputs have been formulated and planned.

77. This present study underpins the technical content of the proposed CPP interventions, and lays the foundation for the development of some of the envisaged outputs, through:

- making recommendations for the methodology for a national assessment of land use impacts on environmental sustainability (Chapter 2);
- conceptualising the potential context, contents and approach for defining environmental sustainability criteria for land management practices in Namibia (Chapter 5);
- presenting an initial policy analysis in terms of identifying salient entrance points for mainstreaming environmental sustainability in a SLM context in Namibia (Chapter 3);
- including an in-depth analysis of LUP-relevant stakeholders and power relationships between them, and identifying existing/potential incentives for engaging them in improved LUP processes (Chapter 4);
- proposing approaches to capacity development for land use planning at local, regional and national levels, including through the development of Namibia LUP toolkits (Chapter 6);
- providing a cross-cutting findings and recommendations which derive from an integrated view of the various chapter contributions (Chapter 7).

Figure 5 depicts the conceptual framework of this study.

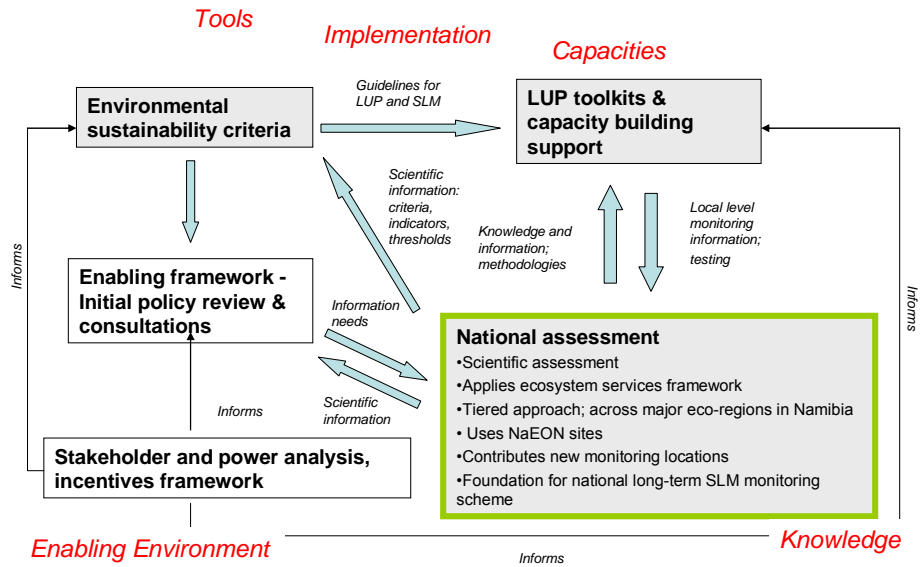


Figure 5: Conceptual framework of this study. It is proposed that improved land use planning (LUP) in Namibia can contribute to sustainable land management. Current capacity bottlenecks pertaining to LUP have been identified at the local, regional and national level. Institutional reform and capacity building of individuals are important to ensure that LUP will be more effective and appropriate in future. It is proposed that specific LUP toolkits be developed as training and resource materials for various target groups, including local natural resource managers and farmers, Traditional Authorities and other stakeholders in decision-making, as well as technical personnel on regional and national levels. Based on lessons learnt from elsewhere, it is recommended to simultaneously improve the enabling environment to ensure that better LUP practices can be implemented and applied, including on tenure arrangements. The recommended work should be scientifically robust and knowledge based. It is suggested that a national assessment should be undertaken that would provide the basis for a national SLM monitoring scheme and provide relevant information for the LUP tools to be developed.

Chapter 2

2 Assessment of the Environmental Sustainability of Land Use

2.1 INTRODUCTION

78. Sustainability is an integral theme and focus of land use planning process. In considering land use options it is important to recognise and understand the impacts and ramifications of such options in terms of their environmental suitability, social acceptability and economic feasibility. Accordingly, the selection and adoption of specific land use options integrates social, economic and environmental sustainability in the planning, formulation and assessment of policies to guide land use as well as the subsequent implementation of land use types. The contextual focus of this report places special emphasis on assessing the status of and developing policy guidelines leading to environmental sustainability in Namibia. For the most part, it is currently not clear what the effects are of various land uses in the country on environmental sustainability (MAWF, 2004). Consequently, it cannot be stated with certainty as to which land uses and management practices would impact positively or negatively on the environment or the degree of such impact.

Box 3: Key sections of Chapter 2

Chapter 2 has five main sections and is complemented by Appendix E :

Section 2.1 is the introductory section explaining why an assessment of environmental sustainability of land uses is important to land use and land reform decision making in Namibia;

Section 2.2 review some relevant technical experiences of such environmental assessments internationally and identifies lessons and linkages;

Section 2.3 details further technical background considerations to the design and implementation of such an assessment. It considers who the key users of the information are and how the information can be used in decision-making; it also established how the assessment could be linked to ongoing work, and seeks **solutions/recommendation to ensure that the assessment will not merely produce paper plans;**

Section 2.4 makes tangible recommendations for the assessment design and methodology; whilst **Section 2.5** includes proposals for the operationalisation of the proposed assessment.

79. In the absence of a thorough understanding of the environmental impact by different land uses (current and past), management and tenure, an extensive range of inappropriate land use and management practices were promoted by government and land uses and applied in the past to the detriment of the environment and sustainable growth (Dewdney, 1996). Resultantly, many suitable developmental opportunities have been missed by not exploring environmentally sustainable land use options (Dewdney, 1996; de Klerk, 2004). It therefore is important to identify sustainable land management practices that promote and sustain growth in arid Namibia while taking cognisance of the inherent limitations to growth in dryland ecosystems. This can perhaps be best achieved by looking at environmental sustainability in the context of 'Ecosystem Services'⁷, and thus considering the benefits that people obtain from ecosystems (MA, 2003). Such an approach would highlight the terrestrial ecosystems of Namibia and key services such as provisioning services (e.g. food, water, wood, grazing), regulating services (e.g. climate, floods, diseases), cultural services (e.g. aesthetic, spiritual, recreation) and supporting services (e.g. soils, nutrients, growth). Ecosystem services provide a logical, non-arbitrary and consistent framework for considering land condition and land degradation, which denotes a persistent decline in the capacity of the ecosystem to deliver services.

⁷ 'Ecosystem Services' are here defined following the Millennium Ecosystem Assessment framework (2003) and subsequent publications stemming from the MA. During the peer review it was suggested to explore in future further developed definitions and frameworks of ecosystem services as well as ecosystem resilience, as a further departure point on sustainability discussions.

80. Although Chapter 1 laid out the land degradation problematic in Namibia, it is recognised that views and research information about the degree and extent of the desertification problematic in Namibia differ (e.g. Seely & Jacobson, 1994; Klintonberg & Seely, 2004; Sullivan, 1996; Sullivan, 1998; Ward et al., 1998; Zeidler, 2000). The scientific debate revolving around the understanding that most of Namibia's (arid; rainfall below 400 mm and coefficient of variation above 33%) ecosystems are at "non-equilibrium", characterised and driven by highly variable environmental conditions, and plant-herbivore interactions are found to be density-independent (Behnke & Scoones, 1990; Behnke et al., 1993; Scoones, 1995; Illius & O'Connor, 1999). It is said that in non-equilibrium systems degradation of natural resources only occurs under exceptional conditions such as prolonged drought (Scoones, 1995). It is recognised that rainfall restricted environments may not show a linear interaction between degradation and overstocking, however, the notion followed in this paper is that land management practices can be more or less suitable and sustainable under given environmental conditions.

81. Namibia's natural environment is generally considered to be water constrained. Thus water should be considered and integral and essential part of sustainable land management. Generally three water resources can be identified: (i) rainfall stored in the soil, available to plants in situ, (ii) ground water flow systems, and (iii) transboundary perennial river systems – and land management determine all three resources at source. Temporally erratic, spatially highly variable and relatively low rainfall regimes characterise Namibia's climate, giving rise to recurrence of prolonged drought periods as a normal agro-ecological feature. Plant production is linked to rainfall and varies considerably from year to year leading to annual variations in grazing availability for wild and domestic animals. There are no perennial rivers within the borders of Namibia with the only permanent flows being confined to transboundary rivers demarcating the international boundaries, namely the Kunene, Kavango, Zambezi, Kwando-Linyanti-Chobe and Orange. Any other "permanent" water body in the country is artificially constituted in the form of water canals or dams. Namibia is primarily dependent on groundwater resources for fresh water supply for human consumption, livestock watering and agricultural irrigation purposes as well industrial processes. Certain land use options require large amounts of water, and are thus not rendered sustainable in certain areas in Namibia where water resources are limiting. Even where groundwater might be available today, the rate of recharge of the aquifers is not necessarily sufficient to match current or future abstractions and guarantee long-term sustainability. Groundwater "mining", i.e. the depletion of groundwater resources beyond their regenerative capacities, is associated with and can be expected from a number of proposed land use options in the country, and should be avoided.

82. Making land use planning decisions and implementing land reform in view of identifying sustainable land management options is highly dependent on the availability of information about the level of environmental sustainability of current and/or potential land uses. Such information can lead and contribute to informed decision-making about land uses that should be promoted or discouraged in Namibia. An efficient and informed decision making process on land use options based on the principles of environmental sustainability are particularly urgent and imperative in face of the on-going land reform programme in the country and the targets set in NDP II, Vision 2030 and the constitution. Addressing the land question in the context of promoting responsible growth will need to consider and address the environmental limitations and opportunities dictated by the dryland framework.

83. To arrive at a comprehensive appraisal and understanding of the impact of different land uses on environmental sustainability, **it has been recommended by the Ministry of Environment and Tourism (MET) (NBSAP, 2002; NDP II) to undertake an all-encompassing national assessment that would study land use impacts on the environment according to key ecological zones in Namibia, and comparing some of the major current land uses.** There are a number of ongoing research activities in Namibia, either carried out by certain research divisions of line Ministries or the national and/or international research community, that generate data, information and insights which could feed into and inform a national scale analysis of the impacts of various land uses (see section 2.2. below). It is nonetheless essential to endeavour a targeted research effort primarily focused on the impact of land use on environmental sustainability that would provide the relevant analytical framework for decision-making. Recently (September 2006) three studies

have been commissioned in Namibia to determine economic viability of various land use options (NPC, pers. comm.). Such work should be linked to the assessment of environmental sustainability.

84. Such an assessment would serve the information needs identified in the national development plans by numerous stakeholders in Namibia and especially the key line Ministries concerned with land use planning and land management, namely MET, the Ministry of Land and Resettlement (MLR) and the Ministry of Agriculture, Water and Forestry. Chapter 6 describes in more detail the roles of various stakeholders in terms of land use and management decision making, all of which are indicated as users of the assessment outputs. Whilst the assessment aims to generate information on land use and management options suitable to the environmental conditions prevailing in different regions in Namibia, it is recognised that such an assessment needs to be planned and implemented as a process. Thus linkages to local level monitoring and land use planning are established, as indicated in Chapters 4 to 6.

85. It is noted that similar questions are pertinent throughout dryland Africa and elsewhere. Whereas it is understood that one country study will not be able to address all the information needs, such an assessment can lay the foundation for national level processes that can be applied elsewhere in future. Linkages with related ongoing work e.g. the Global Assessment of Land Degradation and Improvement (LADA) (GEF/UNEP/FAO) could be of mutual benefit in this regard.

2.2 RELEVANT EXPERIENCES, LESSONS AND LINKAGES

2.2.1 International Experiences with similar exercises/approaches and linkages to Namibia

86. A number of assessments and surveys have been and are being carried out not only in Namibia, but also internationally. Although these are not necessarily designed to address land use planning specific objectives, they do provide good experiences and lessons learnt for application in the Namibian context. Many of these surveys are scientifically rigorous and extremely resource intensive. Some of such surveys are SLM specific; others use biodiversity assessments as planning surrogate or look at the status of ecosystem services.

87. **Examples where biodiversity data have been used for conservation and land use planning** include work carried out in Papua New Guinea, where the local Government in association with researchers from the Commonwealth Scientific and Industrial Organisation (CSIRO) in Australia have used existing and newly gathered biodiversity and environmental data to model conservation options and planning. Applying a computer software called "Target", **GIS based conservation planning options** can be displayed, indicating areas that should be included into a national protected areas network, thus contributing to specific conservation targets, whilst identifying other areas that would be of high value for other land uses (Faith & Nicholls, 1996; Ludwig et al., 1997). The "Slash and burn" project in South-East Asia, provides a good example for a project that has devised and undertaken biodiversity inventory work underpinning land use planning (International Centre for Research in Agroforestry; CIFOR; Gillison, 1999). **Based on long-term and site-based research on a regional and topic-specific basis, detailed inventory data and long-term biodiversity monitoring are being collected and made available for decision-making.** This approach and methodology is widely seen as a best practice. **Most biodiversity assessments have the character of species inventories while making very few or no analytical links to land use, management and tenure impacts on biodiversity.** Conservation International, for example, has designed rapid biodiversity assessment methods, which provide such inventories. The examples were reviewed in the search of best practices and potential methodologies to be integrated into the Namibian assessment. Although some of the methodology could potentially be applied in the context of this proposed study, these would have to be linked to more "ecosystem service" oriented measures. Also, the high technical inputs required for some of the methods reviewed make them impractical in the Namibian context.

88. Table 2 provides an overview of ongoing **global environmental assessments**. Lessons learnt from such assessments were considered in the development of the proposed methodology, and the potential to establish direct linkages with such ongoing work was explored. The global Land Degradation Assessment (LADA)⁸ (lada.virtualcentre.org) carried out under the auspices of FAO proposes through various case studies local/national level assessments of land degradation in drylands (see Box 5 for Global “LADA” case study from Kenya; Bai & Dent, 2006). **The methodology is framed in the context of ecosystem services and a suite of assessment methods have been developed over the past five years. Principle steps to be taken in planning an assessment are generalised and apply generally to the proposed national assessment.**

Box 4: Seven sequential steps proposed in the LADA approach (not universally agreed to at this point)

1. preparation of initial studies;
2. establishment of a national LADA task force;
3. stocktaking and preliminary analysis;
4. developing a stratification and sampling strategy;
5. Field survey and local assessments;
6. development of a LADA decision-support tool;
7. development of a LADA monitoring tool.

Box 5: Global Assessment of Land Degradation and Improvement: pilot study in Kenya (Bai & Dent, 2006)

Identifies:

- the status and trends of land degradation
- hotspots suffering severe degradation or are at severe risk
- places where degradation has been arrested or reversed.

It has been suggested that the GLADA approach be taken to establish a baseline for the planned assessment. Such information would complement the work of Klintonberg & Seely (2006) developing a desertification risk map for Namibia. GLADA is currently being undertaken in South Africa, and it has been recommended that with a relatively modest financial input the study could be extended into Namibia. It should be decided during the CPP inception period, if this would be indeed the most appropriate way of determining the baseline for the study.

89. The local level data (LADA) are linked to other coarser scale FAO related work such as the Global Soil and Terrain Database (WORLD-SOTER⁹; www.fao.org/ag/AGL/agll/soter.htm), GTOS (see below; www.fao.org/gtos), and the global Forest Resource Assessment (FRA). Since 1946, FAO regularly monitors the world’s forests through FRA, and national assessment data are available from Namibia. **Such data could potentially be used in the context of land cover change monitoring (see below).** Other relevant global or regional assessments are the Global International Water Assessment (GIWA) of UNEP (www.giwa.net), although no explicit data from Namibia are included in the assessment. Methodological approaches could be deduced and related to water relevant data available nationally. Similarly resources from the World Water Assessment Programme (WWAP) (<http://www.unesco.org/water/wwap/>) could potentially be considered. Similar linkages, especially with GTOS, are foreseen in the Namibian assessment design.

90. The Southern African Millennium Ecosystem Assessment (SafMA) (Scholes & Biggs, 2004; Biggs *et al.*, 2004) is an in-depth pilot study forming part of the recently conducted global Millennium Assessment (MA) (www.millenniumassessment.org)¹⁰. Although no explicit

⁸ Note that references to “LADA” and “GLADA” are not clearly distinguished in this report.

⁹ It has been recommended that the World-SOTER database should be used for stratifying landscapes i.e. in the identification of monitoring stations and location (see section 2.4). The database is available for Namibia and accessible at www.isric.org, search for SOTERSAF.

¹⁰ The MA focuses on ecosystem services (the benefits people obtain from ecosystems), how changes in ecosystem services have affected human wellbeing, how ecosystem changes may affect people in future decades, and response options that might be adopted at local, national, or global scales to improve ecosystem management and thereby contribute to human well-being and poverty alleviation. The MA synthesizes information from the scientific literature, datasets, and scientific models, and includes knowledge held by the private sector, practitioners, local communities and indigenous peoples. All of

data were collected in Namibia, the various SafMA reports provide a good conceptual framework for an analysis of the findings foreseen locally. The context of “ecosystem services” is well established in the greater frame of “human-well being”. Elements of the approach will be brought forward in the proposed specific sampling methodology as outlined below.

91. Table 2. Overview of global environmental assessments. Data and/or approaches can be partially linked to the assessment methodology. Marked in grey are global assessments of which Namibia is an active partner, has contributed data or is carrying out national level elements. Namibia is a member of ELTOSA, a SADC regional network of long-term ecological research sites of which two are in the country at Gobabeb and Etosha, through which it affiliates to the International Long-term Ecological Research Network (ILTER)¹¹. Further Namibia has initiated the inception of the Namibian Environmental Observatories Network (NaEON), which conceptually is linked to the international arena with ILTER, the Global Earth Observation System of Systems (GEOSS)¹², and the Global Terrestrial Observations Systems (GTOS)¹³.

Table 2: Overview of Environmental Assessment Data and Approaches

<i>Assessment</i>	<i>Lead organisation</i>	<i>Scope</i>	<i>Scale</i>	<i>Timetable</i>
Global Land Degradation Assessment (GLADA/LADA)	FAO	Drylands	Global, regional	Ongoing since 2001, methods for selected case studies available (South Africa forthcoming in 2007).
Forest Resources Assessment (FRA) State of the World Forests	FAO	Forests	Global, regional, national Global, regional, national	FRA 2000 Every 10 years. Bi-annual reports.
Global Environment Outlook (GEO); linked to national State of the Environment Reporting (SOER)	UNEP	Environment	Global, regional SOER (national)	GEO-3 report 2002, GEO-4 currently in preparation to be published in 2006. GEO-Deserts 2006 Bi-annual
Global International Waters Assessment (GIWA)	UNEP	International (transboundary) waters	Global, regional	1999 – 2002
Intergovernmental Panel on Climate Change (IPCC)	Under UN FCCC	Climate Change	Global, regional	3 rd report 2001 Since then special technical reports Next report forthcoming in 2007
Millennium Ecosystem Assessment (MA); linked to Southern African MA (SafMA)	MA consortium	Ecosystems – Goods & Services	Global, regional, national, local	2001 – 2005; all reports published in 2005
World Water Assessment Programme (WWAP)	Unesco	Freshwater	Global, regional, basins	2000, 1 st Report 2003
World Resources Report	WRI	Environment (themes)	Global, regional	Bi-annual

the MA findings undergo rigorous peer review. The MA is an instrument to identify priorities for action. It provides tools for planning and management and foresight concerning the consequences of decisions affecting ecosystems. It helps identify response options to achieve human development and sustainability goals, and has helped build individual and institutional capacity to undertake integrated ecosystem assessments and to act on their findings.

¹¹ ILTER provides a forum for local, regional, and national scientists to integrate findings, share data, join forces on global projects, and deliver sound, impartial data to decision makers and the public. ILTER provides support for networking to country networks such as NaEON.

¹² GEOSS will improve monitoring and understanding of the Earth and enhance prediction of the behavior of the Earth system while meeting the need for global information as a basis for sound decision making.

¹³ GTOS is a program for observations, modeling, and analysis of terrestrial ecosystems to support sustainable development. GTOS facilitates access to information on terrestrial ecosystems so that researchers and policy makers can detect and manage global and regional environmental change.

92. Although Namibia has had long-standing programmes of botanical and soil surveys as well as forest and wildlife monitoring together with attempts to establish a more coordinated national effort at environmental monitoring through NaEON and the Environmental Monitoring and Indicators Network (EMIN) (Nakanunku et al., 2001; Noongo et al., 2002), part of Namibia's State of the Environment Reporting (SOER), these efforts have been slow to take off and do not yield tangible outcomes to date. EMIN has not been operational for the past two years since financial support from the Finnish Government ceased. Recently concerted efforts have been made to develop NaEON more effectively, and a strategic planning meeting is being planned. NaEON will host the 2006 annual ILTER conference at Gobabeb in August 2006. This event may trigger more interest and investments into the operationalisation of NaEON.

93. Methodological linkages between the national assessment proposed in this Chapter and ongoing activities in Namibia, through sharing of data and cross-integration into long-term monitoring efforts will be specifically considered in the assessment design. NaEON, could, for example, use this assessment as an opportunity to develop a cutting edge national long-term monitoring programme of environmental change. Figure 6 depicts the currently existing source and networks of available data in Namibia. The structures for the proposed assessment and the CPP including the Sustainable Development Index (SDI) do not currently exist. Several databases currently are established at a national level (MET, Nabis).

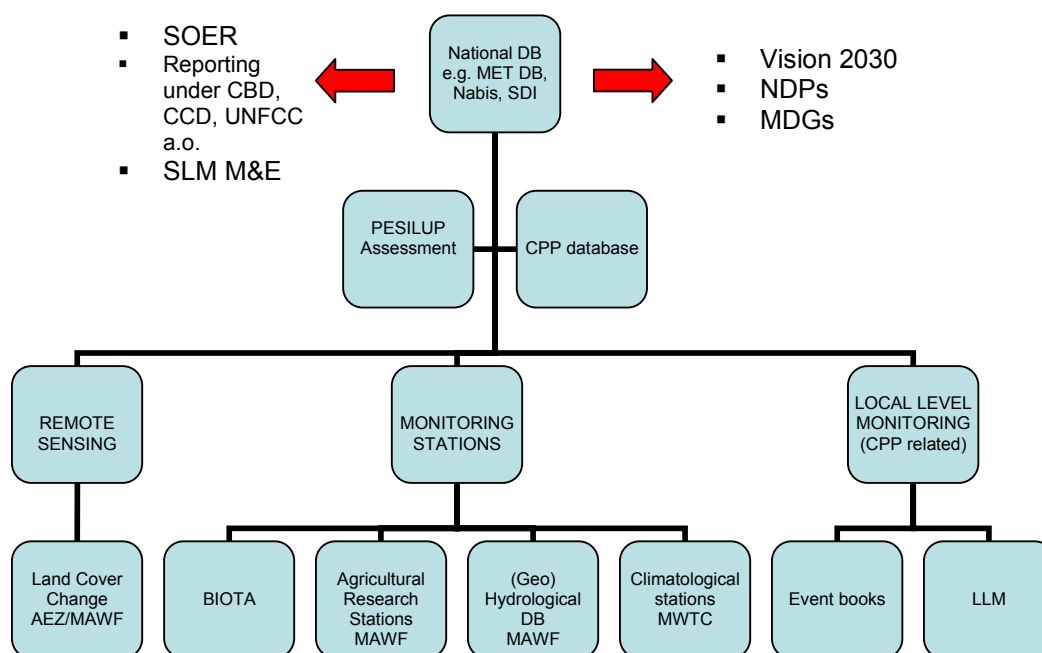


Figure 6: Indicative overview of potential sources and networks of available environmental data for inclusion in a national assessment. The establishment of a national database would lay the foundation for systematic reporting and monitoring of resource trends, which would underpin the national development vision and policies.

2.3 BACKGROUND CONSIDERATIONS FOR THE ASSESSMENT

2.3.1 Current Status of Environmental Datasets in Namibia

94. Namibia is a very large (825 000 km²), seasonally dry, generally sparsely inhabited and often sparsely vegetated country with a low per capita income. Land monitoring approaches and techniques in the country must therefore be adapted for the expansive and seasonal nature of the landscape while keeping the cost of monitoring per hectare, biome or household low. This calls for optimal location of monitoring sites vis-à-vis the operational bases of

monitors, efficient planning and coordination of monitoring expeditions as well as prudent timing of monitoring exercises as to capture all seasonal attributes of land uses.

95. There are considerable activities in Namibia related to land observations. It would be an unjustifiable waste, in a country with limited resources, personnel, skills and finances, if these activities were not coordinated and integrated into a single observation scheme. As part of Namibia's Programme to Combat Desertification (NAPCOD), not operational as such any longer, a national assessment component produced a national desertification risk map, with suggested indicators for application at that scale (e.g. DRFN, www.drfn.org.na; Klintonberg & Seely, 2004). In addition to the established programmes of botanical and soil surveys as well as forest and wildlife monitoring alluded to in preceding section, Namibia is a member of ELTOSA. Local level monitoring (LLM) programmes for range land resources (MAWF) and water (DWA, MAWF) and various regional and national inventories and mapping programmes were carried out in Namibia over the past decade (see Chapter 6 and Appendices E and H), and relevant linkages ought to be established. The rationale is to utilize existing data where possible and integrate a value added analytical component through the land use impact assessment. It is understood that a key effort has to be put into establishing the assessment as a process that is applicable to the needs of the end users and not only a once off study that will land on the shelves of interested individuals.

96. Moreover, the transect of the "Biodiversity Transect Africa" (BIOTA) plots, a German-Namibian collaborative research effort, consisting of paired square-kilometre intensive biodiversity observation sites, covers the entire length of the country from the south to the north to provide ideal data gathering and observation sites for land use impacts. A map showing location of the BIOTA transects and observatories is depicted in Figure . Twenty-three (23) observatories are located at 17 sites, with ten observatories paired by land use and two by catchment. The priority sites have detailed baseline data on ecosystem research and four of the sites have local para-ecologists, who could carry out long-term monitoring responsibilities. **The 3rd and last phase of BIOTA (2006-2009) includes a focus on applications of the research to land use analysis. Outputs will include elements of decision support systems, simulation models, descriptions of environmentally friendly management techniques and advice on policy, all of which have relevance to land use planning.** Very useful linkages could be established to the national assessment and also the development of the ILUP toolkits as described in Chapter 5. Integration of this important work is foreseen through the proposed assessment design, and will be facilitated through information sharing through NaEON.

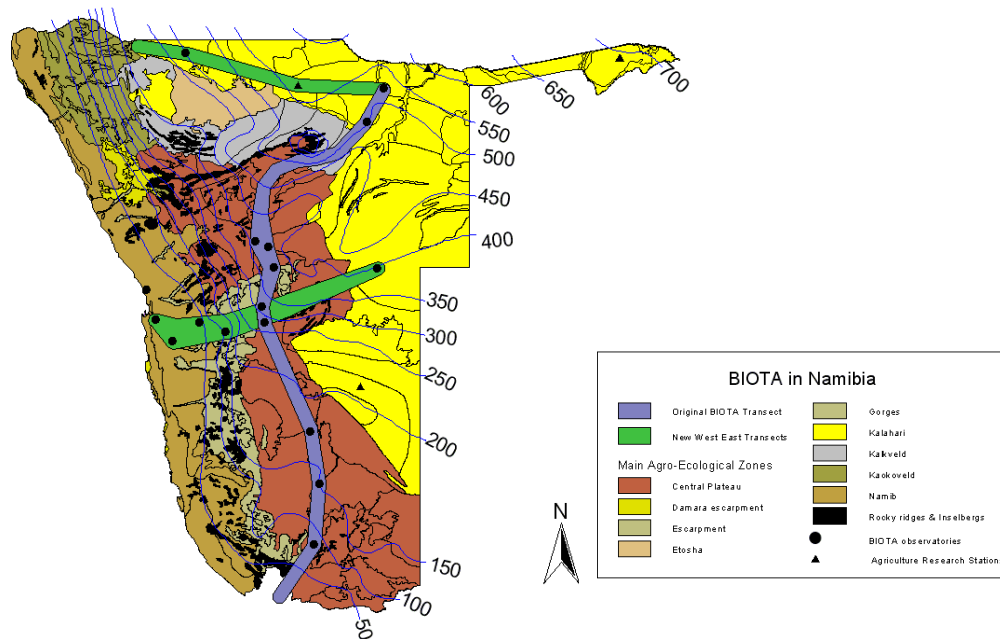


Figure 7. Map of the distribution of BIOTA observatories along various transects across Namibia

97. Recent changes have taken place in global earth observation arrangements leading to the formation of the GEOSS (GEOSS 2005). In the long term, Namibia needs to design its systems to be GEOSS-compatible, so that it can benefit from the two-way flow of information that will result from such arrangements. It needs to take advantage of specific programmes launched in support of GEOSS, such as the European GMES, and the current G8 focus on Africa and Global Change.

98. Namibia intends to undertake a **nation-wide land cover mapping programme** (Appendix E), as part of its Agro-ecological Zoning (AEZ) programme and has completed a pilot study to develop and test the methodological approaches to this undertaking. The land cover mapping links to ongoing long-term biomass assessment. This holds **potential for synergy with a land condition monitoring system**. Firstly, land cover is itself a variable condition, if the classes are defined and measured in an appropriately complementary way. Secondly, the need for calibration/validation observations ('ground truthing'), in land cover mapping can be coordinated with *in situ* land condition monitoring, avoiding duplication of effort and saving costs. Thirdly, the land cover maps, and data derived from the satellite images acquired for land cover mapping, form the only feasible basis for interpolation of a relatively sparse set of ground observations of condition, to the vast Namibian landscape.

99. The Namibian Agro-ecological Zoning (AEZ) programme has also initiated a **Quantitative Land Productivity (QLP) Assessment pilot study** in 2004, **with the purpose to generate data that could guide land allocation and land use planning decision making in the country**. The AEZ/QLP is made of several independent but related components, including (i) a remote sensing based land cover assessment, (ii) soil mapping, (iii) vegetation mapping, (iv) social assessment, and (v) economic assessment (Appendix E). Data from the pilot area are available, although they are currently not interpreted in an integrated manner. This is work in progress.

100. Although formal linkages at this stage are not feasibly established, as the tier horizons for the two interventions do not concur, the herein **proposed assessment will add and super-impose additional information on environmental sustainability of land uses in the MAWF analysis**. It has become clear that the national level up-scaling of the QLP pilot study will be costly and extremely time intensive. At present, no final implementation arrangements for the up-scaling of the pilot study have been made. It is thus necessary to carry out an independent assessment of land productivity at a wider scale than the QLP pilot study in order to meaningfully link productivity to data and information expected and forthcoming from other components such as land cover change. Appendix E includes a flow diagram describing the content of the AEZ/QLP assessment and possible means of establishing linkages with other CPP interventions such as PESILUP.

2.3.2 Users of Monitoring Outputs

101. Land condition monitoring systems need to be user driven if they are to be sustainable. The tendency of such systems to be science and technology-driven needs to be balanced against a meaningful involvement of users during the design, pilot and operational phases. The Namibian ILUP toolkit (Chapter 6) as well as the decision on the identification of Namibia specific environmental sustainability criteria (Chapter 5) ought to be particularly designed with an emphasis on practical applicability and use by all stakeholders across the board from local land users, regional extension officers, land use planners and policy makers. While striving for a scientifically sound basis for evaluations, replication and validity of results, the toolkit development will place a stronger focus on the usefulness of the methods and tools informative device on which sound land use decisions and plans can be based. Toolkits will therefore largely be tailored for the layman. Expected key users of land monitoring include policymakers in national government, particularly the MET, MAWF, and MLR; companies and individuals in the economic sectors of farming, tourism and mining; and civil society (notably environment and development-related NGOs). There is an international dimension through observation requirements relating to treaties such as the UN Conventions on Climate Change, Biological Diversity and Combating Desertification.

102. It needs to be highlighted that it is one of the biggest challenges to ensure that research information is being applied systematically in decision-making. As pointed out throughout this report, making the link between environmental data and social and economic information is an important approach to operationalising a national study of land use, management and tenure impacts. The focus on environmental sustainability proposed here should be embedded in a broader framework, i.e. through taking an ecosystem service approach. It is critical to develop a strong stakeholder and user engagement plan as part of any such research approach and component. It is thus strongly recommended that the planned research be accompanied by a process component which raises awareness about the need and usefulness of the work and envisaged outputs, and generates inputs from the stakeholders into the shaping of the final products. This current study is only a departure point to bring such a process into notion. The CPP for ISLM can provide the necessary institutional framework for establishing strong stakeholder engagement.

103. Numerous previous experiences have shown that it is difficult, however essential, to engage the stakeholders and end-users of the assessment outputs and products throughout the process to foster ownership – and to develop well targeted materials. Lessons learnt from the recently undertaken Millennium Ecosystem Assessment (MA, www.millenniumassessment.org) have demonstrated the level of engagement that is needed to make assessment outputs utilised, even if on a completely different scale.

2.3.3 Scale at User Needs in Space and Time

104. Government decision-makers need information that is statistically reliable at regional government level, which arguably would be in the region of 1 Mio ha at a 3-yearly time scale. Local users, farmers and natural resource managers, need information at farm scale (e.g. 5,000 ha for communal land or freeholder farms, at a yearly or continuous timescale). International users, such as e.g. the UN Convention to Combat Desertification (UNCCD) and other treaties, need national level data, at about a decadal time scale. It is important that a national assessment incorporates such scale issues in its design.

2.3.4 National Assessment of Land Use, Management and Tenure Impacts

105. The objective pursued through the CPP intervention is for Namibia to have a SLM monitoring system that is useful, reliable, sensitive and sustainable. 'Useful' means that the variables observed must have policy relevance. 'Reliable' means that the results are statistically valid. 'Sensitive' means that changes must be detectable before it is too late to do anything about them. 'Sustainable' means that the system must be affordable and implementable by Namibians. Overall, the SLM monitoring system ought to produce environmentally and socially responsive indicators or criteria for translating observations into meaningful actions at policy and technical level. It is thus amongst the objectives of the Namibian government to:

- »» Develop a scientific assessment methodology providing suggestions of suitable indicators of environmental sustainability for land management. Different land use goals including conservation and sustainable use, addressing actions on prevention, rehabilitation and restoration will be considered;
- »» Consider and assess land uses, management practices and tenure impacts, past and present;
- »» Design innovative and replicable methodologies and approaches for measuring environmental sustainability for land management in Namibia;
- »» Develop tools for assessing trade-offs between different forms of land uses;
- »» Integrate the environmental sustainability component with other important elements i.e. social and economic;
- »» Design the assessment as a process that will integrate user needs and react to stakeholder inputs instead of being completely static;

- » Strengthen linkages to ongoing research/assessment initiatives, i.e. the AEZ/QLP and other existing GIS tools and applications, where appropriate.

2.3.5 Approach to environmental sustainability definition

106. This report focuses on developing an approach for the assessment of environmental sustainability, whilst recognising the importance of embedding such a scientific assessment with other “soft” elements, such as social and economic sustainability considerations, user needs, a focus on using the outputs and products from the assessment in real term decision-making in the long-run. Thus limitations of the in the following described methodology are recognised in a sense that they appear very thoroughly developed and thus probably ridged. The proposed approaches and methodology need to be seen as venture point and guidance, which should be further refined and shaped in the early implementation phase of planned follow-up activities.

Ecosystem Services: a conceptual framework for SLM monitoring

107. ‘Ecosystem Services’ are defined as the benefits that humans obtain from ecosystems and ecosystem functions to improve and sustain their well-being (MA, 2003). Such an approach would highlight the terrestrial ecosystems of Namibia and key services such as provisioning services (e.g. food, water, wood, grazing), regulating services (e.g. climate, floods, diseases), cultural services (e.g. aesthetic, spiritual, recreation) and supporting services (e.g. soils, nutrients, growth). In the context of the terrestrial ecosystems of Namibia, the key elements include water, grazing (including browsing of shrubs), timber, fuelwood, habitat for wildlife, nature-tourism landscapes, and soil fertility for crop growth.

108. The concept of ‘Ecosystem Services’ provides a logical objective and uniform framework for appraisal and costing of land condition and land degradation. The services focus gives a rationale for the sort of variables to be measured and ensures the relevance of the monitoring at all times. It also provides a conceptually sound mechanism for linking environmental observations to the other two pillars of sustainability, namely economic and social sustainability. Ecosystem services have an economic value, which can be estimated, and a human value in terms of health, wellbeing, sense of place and livelihoods.

The advantages of a hierarchical system

109. For the environmental component of the assessment is it particularly important to recognize that it is never possible to measure all desired variables everywhere all the time. This is particularly true in a vast country like Namibia with dispersed eco-zones and population distribution. An elegant solution to this problem is to arrange the observations in a logically consistent hierarchy (see GTOS 1997, for conceptual details). This means that a set of sophisticated, comprehensive, ongoing and labour-intensive measurements are taken at very few locations (typically long-term ecological research sites), and at the other end of the hierarchy, a simple set of observations is taken infrequently at a very large number of locations. In between these extremes are one or two steps, to enable a seamless up scaling and downscaling of findings. At the base of the entire pyramid are remotely-sensed images, maps and model-interpolated systems that generate wall-to-wall, time-continuous coverage (Table 3).

110. This specific proposal for Namibia takes note of and make linkages to activities at the first, second and fifth tiers of hierarchical land observations, but its main thrust and focus is on delivering the third and fourth tiers (Table 3) which are currently missing or neglected from the Namibian set-up. A final selection of monitoring sites will have to be done during an inception phase.

Table 3: A hierarchical scheme for land condition observations in Namibia. Tier 3 and 4 data to be collected by the national assessment are highlighted in grey.

Tier	Indicative number of sites	Examples	Purpose
1	2	Gobabeb, Etosha LTERs	Process-based research that leads to the development of new knowledge and models
2	10	Biota sites	Periodically visited locations of intensive research
3	200	Land condition monitoring stations	Representative sites in each broad ecosystem type where more detailed process-related observations are made. Agricultural research stations, river gauging stations and weather stations are related examples.
4	2000	Land condition monitoring points	Statistically valid in situ sampling network for pattern. Calculation/validation of remotely-sensed products. Biological survey sites, forest monitoring plots.
5	800 000 pixels	Land cover map, rainfall surfaces, NDVI products	Complete spatial and temporal coverage at resolution <1 km ² and 1 month, for purposes of extrapolation

2.4 PROPOSED METHODOLOGY

111. The in the following proposed in-depth methodology is worked out to a detailed level of detail for an environmental assessment. If a national assessment study will be undertaken in Namibia, it is important to plan for an inception phase that would concretise the final assessment design, including through further consultations with the intended end-users and stakeholders who requested such an assessment. It is understood that the assessment will be a process; however it is equally important to provide the basis for the “hard” design for such a study. The approach indicated in the previous section highlights that the study will draw from existing studies and information, and will add a specific analytical component.

112. Measurements proposed to be carried out at “monitoring stations” include rigorously quantitative versions of the measurements at the “monitoring locations”, which in turn are in situ versions of the land cover classes. This means that each level acts as a calibration/validation of the level below. If direct linkages with the LADA assessment are planned i.e. to establish a once of baseline, the information collected from the tiered approach will serve as ground truthing sites for LADA.

113. It been kept in mind that the outcomes of the assessment need to be user-relevant and the end user group is fully engaged in the process. The assessment is designed to generate applicable information that will be integrated into development planning and decisions-making. Linkages with other relevant work i.e. on land valuation and economic assessments of land uses should be optimized.

2.4.1 Monitoring stations

114. The 200 proposed monitoring stations are distributed in approximate proportion to the land area occupied by different defined terrestrial ecosystem types (represented by vegetation types), of which there are about 27 in Namibia. No ecosystem type will have less than two or more than 20 monitoring stations with the variations in number dictated by accessibility and representative nature of the site. Stations are subjectively located in places that are representative of the landscape, to which present and future access is reasonably assured. They consist of a more-or-less homogeneous patch of vegetation at least 300 x 300 m in dimension (and preferably homogeneous 1 km x 1 km, with a 250 x 250 m sample taken in the middle). This scale is selected to be compatible with medium-resolution remote sensing, and to be able to average over the small-scale variability inherent in landscapes. The

process of locating monitoring stations will consist of plotting a suitable distribution on a large-scale vegetation map, and then refining the location in discussion with local land managers. There is potential for combining these 'stations' with permanent observation plots used for other purposes (e.g. botanical surveys, bush encroachment, BIOTA plots etc).

Table 4: Types of data and information to be collected per monitoring stations

Aspect	Information elements
<i>Metadata</i>	<i>Date, time, location, orientation, observer</i>
Landscape Function Analysis ¹	Series of parameters, collected on 2 x 50 m line transects, relating to soil surface conditions, especially with respect to hydrology and soil erosion (see Annex 3 for a testing of methodology in Namibia).
Tree and shrub layer analysis ²	36 'circular plots' of small radius (adjusted per station to capture on average 4 trees per plot), measuring stem basal circumferences and recording species. Allometric algorithms solve for biomass, cover, leaf area by species composition.
Herb layer analysis	Grass basal cover from LFA. Grass and forb contribution to forage by the 'Dry Weight Ranking' (DWR) technique ² at 36 locations. Scored by functional type if species identification is impossible
Land use history	Primary and secondary uses in past decade (grazing, cropping, wood harvesting, mining, wildlife conservation etc) and a measure of intensity (stocking rate, harvest off-take etc).
Land tenure history	Ownership category (private, communal, state etc)

Notes

1. LFA is an approach developed in Australia, and widely tested and applied there (Ludwig and Tongway 1995, see also http://www.cse.csiro.au/research/ras/efal/ifa_summary.htm.)

2. See Scholes et al (2004)

3. Jones and Hargreaves (1979)

115. Sampling at each station is envisaged to be undertaken by two people taking about half a day to complete. Local land users will be interviewed, either at the same time or at another time, to obtain land use histories.

116. Monitoring stations will be "fixed" stations with specifically demarcated monitoring plots.

2.4.2 Monitoring locations

117. The sampling strategy for the 2000 monitoring locations is to achieve, as closely as is practical, a statistically representative random sample of the Namibian land surface. Given the inaccessibility of many areas, the road network will serve as a sampling frame, with a priori randomly-allocated distances along road segments¹⁴ serving as the sampling points. Sampling will take place from the road verge, looking in towards the land on either side, removing the need to have to make individual access arrangements with landowners. In the event that a point is unusable (tested against a predefined set of rules), a replacement point will be drawn from the priori set. The points will be precisely located using GPS, and the intention is to periodically revisit and regularly sample them.

118. The time to be taken per point is not expected to be more than 15 minutes, making 10 sites per day feasible assuming a 20 km travel distance between points. Data are captured directly onto a Portable Digital Assistant (PDA) (e.g. Cybertracker; Liebenberg), a handheld electronic device that can download into a computer database. Most information is expected to be generated through visual observations and assessment. The set of data per point will consist of the information as listed in Table 5¹⁵.

¹⁴ The selection of observation sites along the road network may create a sampling bias, however from the interpolations possible to the higher tiers it is believed that the approach offers a pragmatic solution to sampling effort and data quality.

¹⁵ Critical comments in the proposed sampling methodology have included a request for more detailed soil analysis i.e. lab analysis of key soil properties, whilst other comments indicated that often more detailed bio-physical information is being collected than later used and utilized in decision-making. It is recommended that a final assessment design would be scrutinized critically on the usefulness and necessity of including more in-depth or less detailed bio-physical data in the assessment. Review workshops and stakeholder consultations during the inception phase of a planned assessment would be important in such a process.

Table 5: Data and information to be collected at monitoring locations constituting point specific data sets

Metadata: Date and time, Location (latitude, longitude, direction facing, landscape position), slope, aspect, observer
Land cover class (LCCS) ¹
Stereo Digital Photograph ²
Mean maximum height of woody vegetation
Canopy cover of woody vegetation
Three dominant woody species (or their functional types)
Fraction of the herb layer by functional type: perennial grass, annual grass, N-fixing forb, other forb, geophyte
Mean distance between grass tufts and mean tuft diameter (cm)
Soil texture class (finger test: sandy, loamy, clayey, gravelly, stone, salt crust)
Soil colour class (Munsell)
Soil surface condition (%litter-covered, exposed, capped, microflora, eroded, stones)

Notes

1. Di Gregorio and Jansen (2000).
2. A pair of digital colour photos, taken with a 4 Mpixel camera with a 60 degree FOV, 1.5 m above ground level and 1 m apart, using a tripod equipped with a transverse bar. The stereo photo pairs are used to build up a photo archive, with three uses
 - a) To act as a calibration between observers, and between in situ observers and land cover classifiers using satellite images;
 - b) For the extraction of quantitative information such as tree cover and height, making use of their stereoscopic properties;
 - c) To serve as a historical archive of fixed-point photographs, to demonstrate and quantify change.

2.4.3 Remote sensing

119. The FAO LCCS system forms the underlying logic of the land cover classes used in the Namibia Land Cover mapping programme, with the specific Namibian legend being derived as a compatible subset. This is currently the approach being followed in the planning stages of the Land Cover mapping agenda (see Appendix E). This system is based on life form types (~functional types), which makes it possible to link observations to the ecosystem services approach followed in the SLM land condition monitoring system.

120. There are remote-sensing derived datasets that are very important for SLM monitoring, which can also form important input layers to Land Cover classification. It is not expected of the envisaged SLM interventions to commission and collect separate remote sensing data and/or imagery for use in the development of ILUP toolkits or SLM-IM exercises. However, the SLM process will have to liaise and rely on existing projects and programmes that routinely collect such data and information for base map information on key environmental criteria. Differing agendas and objectives may mean that the various remote sensing oriented projects and programmes will gather and generate different types of mapped data that may not always be compatible with ILUP and SLM requirements. By combining and collating data and information from diverse sources, a tier of SLM appropriate data layers can be composed as illustrated in Table 6.

121. The potential of establishing direct links with ongoing GLADA work, and potentially expanding the South African GLADA across the borders into Namibia should be carefully considered (see Section 2.2.1 above).

Table 6: Type and sources of remote sensing data to inform the ILUP toolkit and SLM process

Data layer	Source
Tree cover	De Fries et al. Derived from MODIS data, 500 m resolution. Available from EROS-DAAC
% evergreeness	Derived from the time-course of NDVI or FAPAR
Monthly rainfall	Interpolated from the Namibian Weather Service records for the observation period, using REWS cold cloud duration as an interpolator, and ECMWF reanalysis data to supplement very sparsely sampled areas, such as the Namib.
Albedo	EROS-DAAC. Derived from MODIS data. A sustained increase in Albedo is a strong indicator of degradation.
10-daily Fraction Absorbed Photosynthetic Radiation (FAPAR)	EROS-DAAC. A compromise between NDVI, which is a widely-used measure of greenness, but has no intrinsic ecological meaning, and Net Primary Productivity, which has meaning but doubtful accuracy when estimated by global models.
NPPgrass, NPPtree	A relatively simple Namibia-specific model can estimate NPP of trees and grasses from the annual time-course of FAPAR and the tree cover. Calculated by the SLM project
Water Use Efficiency (WUE)	NPPgrass/(Rainfall-runoff-Tree water use). Runoff and tree water use are model calculations. A sustained depression in WUE is a strong indicator of land degradation.

2.4.4 Statistical analysis

122. The importance of carefully considering the final use of the intended data to be collected and its statistical analysis during the design stage cannot be overstated. It is important to avoid cumbersome collection of data which in the end will not be useful to addressing the key research questions – and management and decision-making needs.

123. The data from tiers 1 and 2 are very specialised, and call for specialised, question-specific analytical tools, not to be defined here. Their key purpose is to create and calibrate process-based models.

124. The tier 3 data lends itself to time-series analysis, either site-by-site, or treating sites as replicates within broader clusters. Given the multivariate nature of the processes involved, covariance analysis is indicated. The usual pre-treatments to ensure normality are required, or else the use of non-parametric statistics.

125. Tier 4 and 5 data is rich enough to be analysed using spatial statistics leading to continuous surfaces of various attributes. ANOVA within ecologically similar regions should reveal locations that differ significantly from expectation.

2.5 PROPOSALS FOR THE OPERATIONALISATION OF THE NATIONAL ASSESSMENT

126. Chapter 1 described the CP for ISLM, Namibia’s country framework for sustainable land management action, and the related projects. The following section is written with the potential of undertaken a national assessment of land use, management and tenure impacts on environmental sustainability as one level of a country-wide SLM monitoring system, which would be developed over the coming years. Whereas the proposed assessment would explicitly provide research information that would inform decision making i.e. the development of SLM criteria and standards (Chapter 5) and feed into the development of land use planning toolkits (Chapter 6), it is in reverse envisaged that in the long-term an integrated SLM system be operational in Namibia. Local level monitoring (LLM) activities (see sections 2.2 and 2.3, and Chapter 6) ongoing and planned under the CPP, should be linked to the design proposed herein. Similarly measures of social and economic sustainability should be further integrated into the assessment design in the future. Embedding the national assessment within the CPP will also provide a platform for the stakeholder and assessment “process”, deemed necessary to ensure that the outputs and products will be applied and utilized.

2.5.1 Levels of participation

127. The proposed assessment methodology is designed as a scientific assessment, with potential for long-term SLM monitoring. Such long-term monitoring could be the repetition of the current assessment. **The outcomes from the initial assessment will determine whether subsequent monitoring and occasional repetitions of the measurements would be important, or if a modified version which would allow for data integration from the local level user, developed as an integral part of the CPP for ISLM local level monitoring (LLM) component would be sufficient.** Levels of participation for the initial assessment have been restricted to the technical level so far (see “acknowledgement section”). It is anticipated that the PESILUP assessment will be a once off activity that will provide technical information urgently needed. It will lay the foundation for long-term participatory monitoring schemes linked to the CPP for ISLM.

128. It is recognised that a specific and intense stakeholder participation plan has to be developed and implemented to ensure that the key involved Ministries stay closely engaged in the assessment process. It has been the fall down of many previous assessments that information was requested, however, once generated not fully incorporated into decision-making. As the request for this specific national assessment was pronounced by the Namibian Biodiversity Task Force and through the NBSAP, NDP and CPP project document, line ministries such as the MET, MAWF and MLR are considered “primary owners” of the assessment. It is, however, understood that such “ownership” has to be nurtured throughout the assessment process. Also, a long-term monitoring perspective and follow-up assessments would optimally be engrained into ministerial activities. If the usefulness of the assessment outputs and process can be demonstrated, a long-term, integrated SLM monitoring scheme should be owned fully by Government.

2.5.2 Organisation of hierarchical data

129. In operationalising the above-outlined methodology, data to be collected as per tier and stakeholders responsible for data collection can be identified (**Error! Reference source not found.**). It ought to be noted that the herein proposed assessment is designed as a once-off survey, with a long-term monitoring component linked to the CPP for ISLM local level monitoring output. There is potential to repeat the survey in its full scope or revised targeted follow-up assessments can be envisaged. During the final assessment evaluation phase recommendations for such follow-up arrangements should be made. The potential linkage to NaEON (sections 2.2 and 2.3) seem to be particularly interesting in this regard. Further, a strategic association with GLADA would potentially set the foundation for follow-up assessments after establishing a national baseline.

Tier 1 and 2 data

130. Tier 1 and 2 data are being collected on an ongoing basis i.e. by the recognised Namibian Environmental Observatories (Gobabeb and Etosha), and the BIOTA programme (under MET’s leadership). Relevant available in-depth environmental data will be utilised for the interpretation of the assessment, tier 3 and 4 data.

Tier 3 and 4 data

131. The PESILUP assessment will focus on assessing tier 3 (land condition monitoring stations, 200 across eco-regional and land use comparisons throughout Namibia) and 4 data (land condition monitoring points, 2000 across similar comparisons). The rationale is that data collected at monitoring stations will be more in-depth and detailed than data collected at monitoring points. Thus the sampling effort at a small, but statistically significant, number of stations is relatively high, whilst the sampling effort at a large number of points is relatively

nominal. The data collected will provide information on the status of ecosystem resilience and ecosystem services e.g. water, grazing, timber and fuel wood, habitat for wildlife, nature tourism, soil fertility, and crop growths.

132. Final sites for tier 3 and 4 data collection will be determined at the onset of the PESILUP inception phase with the technical team that will be contracted to carry out this work. The eco-region and land use maps included in Annex B will guide the decision making process.

Tier 5 data

133. The for Namibia developed remote sensing based Land Cover Change System (LCCS) is based on vegetation life form types (functional types), which makes it possible to link observations to the ecosystem services approach proposed for the design of tiers 3 and 4 for a Namibian SLM land condition monitoring system. It is not expected of the envisaged PESILUP interventions to commission of collect remote sensing data and/or imagery as these are routinely collected by other ongoing programmes.

Table 7: Data that should be collected as per tier is described column 4 (Meta data/data/data layer).

Tier	Indicative number of sites	Examples	Meta data/data/data layer	Data collection
1	2	Gobabeb, Etosha LTERs	Process-based research that leads to the development of new knowledge and models	Ongoing
2	10	Biota sites	Periodically visited locations of intensive research	Ongoing
3	200	Land condition monitoring stations	<ul style="list-style-type: none"> • Landscape Function Analysis • Tree and shrub layer analysis • Herb Layer analysis • Land use history • Land tenure history 	CPP/PESILUP
4	2000	Land condition monitoring points	<ul style="list-style-type: none"> • Metadata: Date and time, Location (latitude, longitude, direction facing, landscape position), slope, aspect, observer • Land cover class (LCCS)¹ • Stereo Digital Photograph² • Mean maximum height of woody vegetation • Canopy cover of woody vegetation • Three dominant woody species (or their functional types) • Fraction of the herb layer by functional type: perennial grass, annual grass, N-fixing forb, other forb, geophyte • Mean distance between grass tufts and mean tuft diameter (cm) • Soil texture class (finger test: sandy, loamy, clayey, gravely, stone, salt crust) • Soil colour class (Munsell) • Soil surface condition (%litter-covered, exposed, capped, microflora, eroded, stones) 	CPP/PESILUP
5	800 000 pixels	Land cover map, rainfall surfaces, NDVI products, FAPAR	<ul style="list-style-type: none"> • Tree cover • % evergreenness • Monthly rainfall • Albedo • 10-daily Fraction Absorbed Photosynthetic Radiation (FAPAR) • NPPgrass, NPPtree • Water Use Efficiency (WUE) 	MAWF, LCC project Ongoing

Tier 1 and 2 data collection is ongoing at long-term Environmental Observatories in Namibia, whilst Tier 5 data, remote sensing information, is routinely collected by other organisations. In the scope of the proposed PESILUP SLM land condition monitoring tier 3 and 4 data ought to be collected during a national assessment/survey.

2.5.3 National assessment

Team

134. It is proposed that a team of researchers should be contracted as external consultants to the CPP process. For the environmental assessment component, such a team should be composed of one ecological analyst, MSc or PhD level, preferably with some social and economic assessment background, to be hired for a two year period to coordinate the assessment activities, the field teams, and analyse, process and write-up the field data. The ecological analyst would be supported by four field technicians, Diploma level, hired for one year, to carry out field work and process field samples in the lab as well as undertake necessary data entry. An advisory team would support the assessment team as needed throughout the assessment period¹⁶. The advisory team should optimally be composed of experts from various technical backgrounds, including bio-physical and socio-economic. The CPP management and support structures should provide the relevant steering functions for such a project. M&E functions shall be carried out by the CPP governing structure. If a technical task team should be established to oversee this rather technical work should be considered (see data validation below).

135. It would be desirable to include a trainee/young professional element to the project team. Students from higher learning institutions with relevant technical specializations should be granted the opportunity to gain relevant experiences through attachment to the project. Relevant arrangements should be made during the inception of the proposed assessment to facilitate this. It is also noted that the field staff, although not formally part of the workplan beyond the field assessment phase, should be given the opportunity to (i) learn about data analysis and processing including write-up, and (ii) be involved in the feedback on the research results to the scientific community and policy/decision makers.

Assessment outputs

136. The three outputs expected from the assessment process and activities as follows:

- »» A scientific report
- »» A policy maker summary
- »» Recommendation for SLM monitoring methodologies at local, regional, national level linked to the CPP for ISLM
- »» Technical information feeding into the finalisation of environmental sustainability criteria (Chapter 5)
- »» Technical information feeding into the development of the LUP toolkits (Chapter 6)

Data storage

137. All data collected will be stored in the most suitable available Namibian database context. Currently it can be envisaged that metadata be housed with the Ministry of Environment and Tourism, following the example of the Namibian Atlas (see www.met.gov.na). The Atlas project has made available the content of the atlas and all related maps on-line via the Ministry for public consumption. MET's webpage is currently amongst the most accessible and reliable web-based tools in the country. During the duration of PESILUP a strategy and policy for data storage and sharing should be developed. There are a number of MET and other support programmes planned/currently underway, which target the improvement of environmental data bases in Namibia. Aside the already describe

¹⁶ Dr. Bob Scholes of CSIR/Pretoria and Dr. Mark Thompson of EarthGeoTerralmage/Pretoria are two southern African experts with strong expertise relating to the assessment. Their future involvement in the assessment would potentially be beneficial.

MET webportal the Namibian Biodiversity Information System (NABIS) (www.biodiversity.org.na), currently housed at the National Botanical Research Institute (NBRI) of the Ministry of Agriculture, Water and Forestry (MAWF) could provide another viable option for data storage. It is anticipated that the CPP for ISLM will provide the overall framework to which PESILUP would link such a strategy (www.cppnam.net).

Data validation

138. Primary responsibility for data validation would rest with the contracted expert team, including the ecological analyst and the advisory team. The CPP for ISLM governing structure provides for the Steering Committee functions relating to CPP associated projects. Regular reporting schedules are established in the CPP work plan, currently calling for quarterly meetings between the CPP implementing mechanism and project coordinators/expert staff. Such CPP – project performance management arrangements can be utilised to strengthen also the management and the outcome of the PESILUP work, i.e. the national assessment. Technical working groups are foreseen in that same structure, providing technical guidance where required.

139. It is proposed that throughout the assessment process publication of the results in national and international scientific journals/presentation at conferences is encouraged. Such interactions with the scientific community can greatly contribute to data validation.

Assessment output dissemination

140. The outputs linked to (i) the finalisation of environmental sustainability criteria and (ii) the LUP toolkits are associated with the dissemination strategies as laid out in the respective Chapters. Linkages to other local, regional and national SLM monitoring ought to be established vis-à-vis the CPP for ISLM. During the planning phase of the CPP and the recent formulation of the CPP project document, explicit linkages were formulated in this respect. The stand alone scientific and policy maker reports suggested would need to follow their own dissemination plans. A specific budget line for the publication of the results has been included in the draft budget, as well as for conference and launches. It is envisaged that these budget lines will also include financial resources for the implementation of a dissemination plan.

141. The implementation of the dissemination plan should be the joint effort of the PESILUP implementers and the “communication and outreach desk” of the CPP. A full-time staff will be hired by the CPP for this purpose and PESILUP should make maximum use of the support services the CPP can offer. This will also strengthen further the inter-linkages with the umbrella programme.

142. It would be desirable to involve all stakeholders in the implementation of the dissemination plan. Consultations with key stakeholders in this regard should be scheduled during an early phase of the assessment. For example, the policy makers publication could be jointly published by MET, MLR and MAWF and be launched in Cabinet. Summaries of the scientific assessment could be published in the DEA/MET Research Discussion Paper Series, and be disseminated through the MET resource centre, to mark a few suggestions.

143. Two major outputs will be produced from the assessment (i) scientific report, and (ii) a policy document. A suite of possible dissemination mechanism/activities are indicated below. Those that should be acted on as a matter of priority are highlighted in bold and coloured in grey.

Table 8: Dissemination Plan for project outputs

Elements for dissemination plan	Target group	Budgetary/organisations considerations
SCIENTIFIC REPORT		
Webpage & e-mail mail alert	National scientists International scientists CPP community of practitioners Other interest groups	If linked to already existing webportals low-cost (e.g. MET, CPP)
International publication(s)	All the above	Low cost if in existing scientific journals; high cost if published independently; preferably to be published by involved Ministries; will need inputs from consultants; could be required in Terms of Reference
Mail-out of hard copy/launch event	CPP community of practitioners	Need to cover costs for printing of report and postage for mail out; A comprehensive mailing list should be developed during the project phase, as part of stakeholder plan
National/international conferences	Peers	Consultants should actively seek to present work in progress/final results at relevant fora; e.g. at planned CPP science/ practitioners conference
POLICY DOCUMENT		
Webpage & e-mail mail alert	Namibian and international community of practitioners Other interested groups	If linked to already existing webportals low-cost (e.g. MET, CPP)
International/national publications	Namibian and international community of practitioners Peers	Low cost if published in established magazines/scientific journals; high cost if published independently; preferably to be published by involved Ministries; will need inputs from consultants; could be required in Terms of Reference
Mail-out of hard copy	Policy makers at all levels Special mail out for parliamentarians	Need to cover costs for printing of report and postage for mail out; A comprehensive mailing list should be developed during the project phase as part of stakeholder plan
National/international conferences	Namibian and international community of practitioners Peers	Consultants should actively seek to present work in progress/final results at relevant fora; e.g. at planned CPP science/ practitioners conference
Launch event e.g. in Parliament or poster exhibition	Policy makers at all levels Special target group: parliamentarians Special target group: staff of relevant line ministries and non-governmental practitioners	To be headed by relevant Ministries; PESILUP coordinator/ consultant to support; Power Point Presentation to be prepared, could be required in Terms of Reference; link to other relevant CPP activities
Contribution to LUP national conference (see Chapter 6)	All stakeholders from local, regional and national level (see Chapter 6)	See Chapter 6 PESILUP coordinator/ consultant to support; Power Point Presentation to be prepared, could be required in Terms of Reference;

144. Note that the dissemination plan does not include peer reviews and reporting to a technical task team (see section 2.5.3.4).

Evaluation of assessment outputs

145. Either as part of the dissemination plan or project management an “end-user impact assessment” of the outputs should be undertaken. This means that a survey should be designed, e.g. vis-a-vis the mail out campaigns for the two reports, which would determine (i) if the products were designed end-user friendly, (ii) if the information provided was of any use, (iii) in what type of a context the reader would apply the information, (iv) if it would be useful to regularly update the assessment information through establishing a long-term SLM scheme. Further it would be desirable if real impacts of the outputs onto decision making

could be established. Indicators such as how often the report or data from it would be cited (i) in the newspapers, (ii) in Cabinet sessions could be developed and monitored.

Assessment activities that have already been carried out

146. During the preparation of this report and the development of the CPP framework and PESILUP project various activities in support of the assessment have already been carried out. The development of a draft assessment methodology and participation and review from various technical experts in the field has taken place over a two year time period. A first stratification supporting the final decision on the location of monitoring land condition monitoring points and stations has been systematically developed. Consultations with the "grant recipient" team, the CPP and other collaborators i.e. from the AEZ project are ongoing and relevant contacts have been established.

147. Elements of the field methodology have been tested in Namibia and in South Africa. The methods for data collection at monitoring stations were tested by Hamukwaya (2004) and Lindombo (2005), and other researchers previously associated with Namibia's Programme to Combat Desertification (Napcod). Remote sensing work is ongoing at MAWF.

148. It is envisaged that field work for the assessment can start shortly after the inception of the proposed assessment.

Time frame

149. The assessment has been planned as an integral part of the CPP for ISLM, however the assessment can be undertaken as a stand alone activity, not depending on other similar studies, other than ongoing remote sensing information. The assessment should commence as soon as possible after the inception of the CPP. Field work and sample processing, including data entry should be completed within a period of one year. The final outputs from the assessment will be completed by year two of the project, to allow for integration of relevant research results (i) into the finalisation of environmental criteria for land use planning and (ii) the finalisation of regionally and locally adapted ILUP tool kits. See suggested timeline in workplan below.

Proposed elements of assessment workplan

150. Table 9 below details proposed activities, as well as the team, to be undertaken during the assessment exercise to derive expected outcomes. Note that the proposed outcomes and activities are not strictly sequential and should be partially implemented in parallel.

Financial considerations

151. Appendix I includes an indicative budget providing indications of how much financing would need to be required to carry out the national assessment as proposed.

Table 9: Work plan for proposed land use, management and tenure impact assessment

Outcomes	Activities	Team	Timeline*
1. Final design of assessment methodology and sampling design	<ul style="list-style-type: none"> Consider integration of socio-economic sustainability data Evaluate existing assessments and databases for potential integration into design; links to NAEON and other Decide whether it would be useful to expand GLADA South Africa into Namibia to establish baseline Design field sampling protocol (eco-region and land use comparisons) Consultation/peer review of final methodology; develop strong engagement plan for end users and other stakeholders “Launch” of assessment potentially as part of the CPP for ISLM and PESILUP activities 	<p>Advisory team Analyst Field team National/ international experts/practitioners</p>	I Q1 – inception period
2. Field work	<ul style="list-style-type: none"> Train field staff and develop work plans as per team Run a field testing of methodologies, discuss with advisors/peers Split a “south” and a “north” team and furnish with assessment equipment (cars, cameras, field assessment forms, etc.) Develop database for field results Computerise data as ongoing activity along side field assessment Verify data entries 	<p>Analyst Field team Advisory team</p>	I Q2 – II Q2
3. Data analysis and interpretation	<ul style="list-style-type: none"> Process data and undertake statistical analysis as data come in Discuss preliminary results regularly with advisors/peers Conduct data presentation meeting once all data are processed Finalise data analysis Interpret data in an ecosystem services and land use options context Circulate draft results and recommendations to advisory team 	<p>Analyst Field team Advisory team</p>	Ongoing during field work period (I Q2 – II Q/2); final between II Q/2-II Q/3
4. Scientific assessment report and peer review	<ul style="list-style-type: none"> Write-up all research results Publish in peer reviewed journal Confirm results and interpretations Present at CPP fair or other relevant conferences 	<p>Analyst Advisory team</p>	II Q/3
5. Policy maker publication on land use options	<ul style="list-style-type: none"> Prepare publication targeted at Namibian policy and high-level decision makers Plan dissemination plan for publication (e.g. launch, support materials) Link to proposed CPP and PESILUP capacity building plans for various stakeholders 	<p>Analyst CPP team and relevant project staff Advisory team</p>	II Q/4
6. Recommendations for SLM monitoring methodologies (local/regional/national levels)	<ul style="list-style-type: none"> Based on the assessment results and experiences provide technical inputs into the scientifically sound development/improvement of existing/ to be developed local level monitoring schemes Establish long-term SLM monitoring programme as integral part of NaEON and CPP for ISLM 	<p>Analyst CPP team and relevant project staff Advisory team</p>	II Q/4
8. Integration into ILUP tool kits	<ul style="list-style-type: none"> Based on the assessment results and experiences provide regionally/locally adapted information for the ILUP toolkits (Chapter 6) 	<p>Analyst CPP team and relevant project staff Advisory team</p>	II Q/4 and subsequent
9. Final recommendation and confirmation of environmental sustainability criteria	<ul style="list-style-type: none"> Based on the assessment results and experiences recommend/confirm final set of environmental sustainability criteria 	<p>Analyst CPP team and relevant project staff Advisory team</p>	II Q/4

* Project years are denominated in years I to III (for assessment only I and II); each year is divided into 4 quarters (Q)

Chapter 3

3 Policy analysis: mainstreaming environmental sustainability into land management practices

3.1 INTRODUCTION

152. The ability, capacity and dedication of individuals, communities, statutory institutions and national agencies to institute, practise and promote ISLM is largely governed by existing policy and regulatory frameworks. **The entire spectrum of pronounced government policies, specifically those on natural resource and land management, sets the stage and determines the limitations as well as opportunities for the use of land in a sustainable and integrated manner.** Set policies and regulatory directives determine the suite of politically desirable and socially as well as legally permissible approaches and practises in the exploitation of the natural resource base and land use. To this end, it is requisite for any serious attempt at assessing the potential and scope for SLM to review, analyse and evaluate the policy environment governing land and resources usage.

153. Driven by political, social and historic circumstances, Namibia reviewed and reformulated old policies and drafted legislation to repeal old laws. **Since independence substantive changes in overarching development initiatives, sectoral policies, legislative instruments as well as inter-sectoral interactions have been implemented.** Namibia has not only become a signatory to a number of international conventions and treaties, but also charted its own development ideals through the formulation of a long-term Vision and medium term National Development Plans of which two have run their course while the third is being formulated based on a review of NDPII. A key overarching policy strategy and action programme for poverty reduction inspired by the MDG's along with a decentralisation drive that aim to take democratic and participatory governance as well as development planning to the grassroots have been actively pursued. Additionally formulated were policies on land reform, allocation and natural resources (use, management, access, harvesting, protection). All these mark bona fide transformation of the policy landscape in Namibia.

154. **It is the object of this Chapter to present a synoptic overview and analysis of selected government policies, plans, programmes and strategies relevant to the sustainable management and use of land and associated natural resources, and to make recommendations on how the enabling environment can further be improved.** However, this study does not present an exhaustive review of these implementation instruments.

155. This Chapter reviews recent policy directives, including the manner and degree to which they influence sustainable land management. It considers whether environmental sustainability considerations have been sufficiently addressed in the formulation of policies and enactment of policy instruments. Sustainability is a common thread in almost all national policies, but may be understood and interpreted variably at local, regional, sectoral and national levels. **Although environmental sustainability is the focus of the analysis, a degree of social and economic sustainability considerations has been addressed.** The identification of overlaps and/or contradictions amongst policy promulgation and passage of legal instruments forms part of the analysis. **Although many laws, proclamations and regulations from the pre-independence dispensation are still in effect, the analysis herein is confined to post-independence policies and laws.** This review also ought to be seen in the context of other reviews ongoing/recently undertaken such as under the CPP for ISLM umbrella programme and the National Capacity Self Assessment (NCSA) for Global Environmental Management. Other work such as from under taken under Namibia's National Programme to Combat Desertification (Nacod) (Dewdney, 1996; de Klerk, 2001), the Permanent Technical Team on Land Reform (PPT) (MLR, 2005), a related report by GFA

Terra Systems, and Namibia's Participatory Poverty Assessments (PPAs) (ongoing) has also been considered.

156. The Chapter strives to identify barriers, gaps, conflicts and opportunities for enabling the strengthening and mainstreaming of environmental sustainability into land management practices in Namibia at all levels, using the following key criteria:

- » Extend to which the particular policy is affecting environmental sustainability, including all potential related perverse incentives
- » Stakeholders involvement in the design and implementation;
- » Devolution of decision making powers and responsibilities to grass-root level institutions and stakeholders;
- » Compliance and level of harmony with other relevant policies;
- » Institutional framework and the capacity of the institutions to administer and implement policy at all levels.

157. The Chapter is organised in a way that **more detailed reviews of the individual policies and policy instruments are included in Appendix F, whilst the main Chapter primarily contains the interpretation of the analysis.**

Box 6: Key sections of Chapter 3

The Chapter is organized into four key sections, substantiated by Appendix F:

Section 3.1 gives an introductory perspective;

Section 3.2 defines policy in specific orientation to the paper and presents the process of policy development, limitations of the present analysis as well as a chronological timeline in terms of policy developments significant to SLM in Namibia since independence in 1990;

Section 3.3 & Appendix F give (i) an overview of SLM relevant sections of national developmental guiding principles and policies, and (ii) an overview and analysis of sectoral policy and legal provisions under four thematic areas of land, natural resources, agricultural food production, and decentralisation of governance. Section three concludes with (iii) a surmising overall perspective on the synergy and harmony of all relevant policies presented giving an analytical overview of opportunities, gaps and challenges to SLM.

Section 3.4 concludes with key recommendations, distinguishing potential short-term and long-term interventions.

3.2 POST-INDEPENDENCE ENVIRONMENTAL AND LAND RELATED POLICY EVOLUTION

158. Since Independence of Namibia in 1990, major developments in the land, natural resources and environment related policy realm have taken place. Table 10 provides a chronological overview of some of the key events and a summary of the key implications of these.

159. As a land mark event, the 1991 National Conference on Land Reform and the Land Question formed the basis for the subsequent formulation of several land related policies, provisions and legislation. Similarly new provisions were developed of the environmental and natural resources management sectors. Devolution of natural resources management rights and responsibilities is been a key concern in the formulation of the newly emerging policy instruments.

160. Table 10 indicates policy compliance, coordination and enforcement as relating to sustainable land management, and identifies key issues – opportunities and barriers to SLM. This is important in the context of planning the proposed PESILUP project, as the enabling environment for the project is directly impacted through these. Particular pertinent events relevant to CPP and PESILUP, particularly those which took place more recently, are marked in grey.

Table 10: Time-trend analysis of events around policy development relative to land, environment issues, natural resource management and devolution of functions in Namibia. Adapted from Tjimune, unpublished and partially integrated into MLR, 2005.

Year	Key Impetus and Events Leading to Policy Development	Policy Development Process Outcomes and Provisions	Policy Convergence, Overlaps, Contradictions and Gaps	SLM Compliance, Coordination & Enforcement
1990	Land ownership and distribution remained highly skewed at Namibian independence. First session of the National Assembly adopted a motion for the Office of the Prime Minister to convene a land conference	The Prime Minister supported the motion, describing this matter as one of great urgency. Efforts are embarked upon to organise and convene the conference with a broad representation of all key stakeholders in land	The land conference was the first socio-political development to give credence to the national policies of reconciliation, equalisation of wealth distribution and access to land and properties	The diversity of stakeholders and vested interests represented at the conference gave rise to a holistic and integrated consideration of all issues
1991	The National Conference on Land Reform and the Land Question is convened by the PM in Windhoek	Conference deliberations culminate in the adoption of resolutions that formed the basis for many subsequent policy directives on tenure, planning and use of land	Resolutions from the conference addressed multi-sectoral issues on land rights, financial support and institutional arrangements	Broad-based participatory deliberations representing all land use objectives are in the spirit of SLM. Ensuing Acts to enforce
1992	Articles 12 and 102 of the Constitution provide for 3 tiers of government at national, regional & local levels	The Local Authorities Act and the Traditional Authorities Act were passed by cabinet. Regions delineated, RC's elected	Decentralised governance echo CBRNM approaches to natural resource use/management	Decentralisation devolves powers to local levels and empower local resource users.
	In the wake of the Land Conference, a need arise for enactment of legislation to give effect to the key resolutions passed by the Conference.	A Technical Committee on Commercial Farmland is constituted by Cabinet to look into the matter. The TCCF made recommendations that were taken into account during the drafting of the Commercial Land Reform Act	Consultations by the committee were limited to written submissions from institutions/ individuals, allowing little scope for debate on contradictions or convergence of issues	TCCF considerations and inputs confined to land distribution and ownership with little attention paid to land use options in the different targeted farm/AEZ's
	National Land Conference resolution calls for granting of affirmative financing to relocation strong communal area farmers with large herds of livestock	The Affirmative Action Loan Scheme, Initially designed for full time farmers to acquire freehold land is launched. Low interest loans with flexible repayment terms made available	Though originally designed for full-time communal farmers, many people in full-time employment benefited from the scheme. No training of farmers	Over 640 fulltime and part-time farmers benefited from the scheme, but difficulties are experienced with servicing debts
	A need is felt for a national policy on forestry-products	The Forest Policy of 1992 was adopted by government	In line with other CBM of resources approaches	No legal status set to local level structures
1992 -1993	A specific programme of action on the approach to be taken by government on land reform was needed. Thus an ad-hoc Cabinet Committee was appointed in 1993 to make specific recommendations on a programme of action to be adopted by Cabinet	The Cabinet Committee consisting of Ministers of Information and Broadcasting, Justice, Agriculture and Lands reported to cabinet and In November 1993 Cabinet approved fundamental principles laid out in the report to give the green light for a land reform policy to be drafted	Though the land reform policy covers a wide range of land related issues on access, tenure, allocation, ownership, administration and leases, it is less clear on the rights to natural resources associated with land such as forests, water, game	Difficulties experienced with enforcing a number of provisions in the land reform policy such as expropriation, sufficient funding for purchase of farms, training of and back-up support to beneficiaries
1993	Policy needed to cover water supply and sanitation in the country in face of disjointed past legal provisions	After reviews, the Water Supply and Sanitation Policy (WASSP) of 1993 was adopted by government	Policy does not cater for chronically poor people unable to afford water or costs of new boreholes	WASP promotes community participation in the operation and management of water
	Article 95's Constitutional guarantees of sustainable natural resource use need to be reflected in all policies, programmes and projects in the country	Namibia's Environmental Assessment Policy (NEAP) of 1993 was adopted by government, requiring the inclusion of EIA's in all major developmental undertakings	Very broad definition of 'environment' cover all biophysical, social, economic, cultural, historic and political aspects that are not explicitly defined	EIA's are not legally enforceable in the absence of legislation. No statutory body in place to monitor and enforce EIA's
1993 - 1994	Land tenure in communal areas was seen to be insecure and therefore detrimental to investment and development of such areas.	The MLR initiated pilot projects and studies to investigate options for increasing access to secure tenure in informal urban settlements. The reports emanating from the consultative process of workshops formed the basis for the drafting of the <i>Recognition of Starter Title Tenure Rights and Landhold Title Tenure Rights Act, 1999</i> .	A series of workshops were conducted in Windhoek and the northern regions to consult stakeholders on their problems and possible solutions, broadening grassroots inputs into key policy developments affecting them	The Bill has been discussed in several workshops but has not been tabled yet to cabinet.

Year	Key Impetus and Events Leading to Policy Development	Policy Development Process Outcomes and Provisions	Policy Convergence, Overlaps, Contradictions and Gaps	SLM Compliance, Coordination & Enforcement
1994	The civic society felt left out in the development of policy and implementation of programmes on land reform which they felt failed to meet their wishes and real needs for access to land/ income generation	A People's Land Conference was organised by institutions of civil society in Mariental which led to the creation of an NGO Working Group on Land.	The input and influence of civil society on the entire process of policy cycle remain marginal, as government seems to take little cognisance of their inputs.	Resolutions emphasised the participation of civil institutions in policy making and programme implementation. Many of these resolutions were not implemented due to institutional weaknesses.
1995	The Commercial Land Reform Act 5 / 1995 passed.	The law gave effect to government land reform programme in freehold areas. Government started to acquire freehold land for its resettlement programme.	Critics feel the Bill was passed too hastily, with limited consultation, driven more by a desire to have it place before elections.	LUP is envisaged as part and parcel of the land reform process
	Socio-ecological surveys indicated that communal area residents wanted conditional ownership rights over wildlife in freehold areas extended to them.	The Policy on the Promotion of Community-Based Tourism (1995) was adopted to allow communities to establish conservancies and benefit from wildlife in their areas	Policy only give limited rights to communities for non-consumptive use of game. Conservancy land use plans overruled by regional MLR plans	Conservancy formation and participation is voluntary, with no recourse to ensure adherence to rules by non-members.
	Need for economic growth of the Agricultural sector	Government adopts the National Agricultural Policy (NAP)	Emphasis placed on sustainability & productivity	
1996	MLGHRD heads a consultative dialogue amongst government ministries on decentralisation	The government officially adopts a Decentralisation Policy which is then passed in 1997 identifying its form/stages	No timeframe set for completion of process, resulting in slow progress. Policy in line with CBM	Decentralisation is SLM friendly, devolves resource management to the local level.
	The First Working Paper on Communal Land unofficially circulated.	Civil institutions (NNFU, RISE, NDT) began consultations with rural communities to obtain their input.		Local level input and consultations instigated by the civil society is key to SLM
	Need to extent the benefits accruing to private farmers from wildlife resources to communal land farmers	Nature Conservation Amendment Act, 1996 (No. 5 of 1996) passed. Group rights to manage wildlife resources granted	Ownership rights and managerial powers to community are allied with CBM approaches	The Act is primarily aimed at encouraging sustainable use of natural resources.
	Clear objectives and strategies for efficient planning & management of forestry development needed	Namibia Forestry Strategic Plan (NFSP) of 1996 was adopted. Capacity building programmes instigated	Ownership rights and managerial powers to community living in forest areas are concomitant with Water and Nature Conservation policies/laws	
	Proliferation of fences in communal areas carve up a substantial portion of communal lands for the powerful communal farmers to the exclusion of weak farmers	President declared a moratorium on illegal fencing in communal areas.	This provision against illegal fencing was made in the Communal Land Reform Act 2002	Fencing continues despite the moratorium. The absence of any legal tool hampered government intentions.
1997	Resettlement projects and land reform seen to operate in policy vacuum, necessitating the formulation of a anew policy	The National Resettlement Policy adopted by government.	A major critique is labelled against the policy's 'inclusive' definition of beneficiaries as previously disadvantaged regardless their economic status	This policy came two years later than the Commercial Land Reform Act.
	Drought interventions are seen to encourage and underwrite unsustainable and risky farming practices	Following revisions of drought strategies, government adopts the National Drought Policy and Strategy (NDPS)	Requirements for local input & devolved powers of management/decision-making in line with CBM	Economically and ecologically sound and sustainable farming practices encouraged
1998	The management of water resources needed to be brought in line with Integrated Water Resource Management principles and approaches. To do this, a comprehensive review of the laws and institutions involved was necessary	Namibian Water Resources Management Review (NWRMR) was launched. The NWRMR examined water resources management practices and identified key issues and challenges to extensively review thematic areas and initiate participatory discussions on possible changes.	Strong emphasis is placed on environmental protection, preservation of aquatic habitats and the devolution of operation and management functions to lower levels.	The review culminated in the development and elaboration of a new policy framework for water resource management in the country. Broad-based consultations held with stakeholders throughout Namibia.
	Commercial Land Reform Act and AALS scheme were adopted in a policy vacuum on land, hence one needed	National Land Policy adopted that provides for Land Use and Environmental Board (LUEB) and Land Boards.	Proposed CLB and LUEB has many overlapping functions with other sector institutions and TA's	It is the explicit functions of proposed LUEB to ensure sustainable land uses

Year	Key Impetus and Events Leading to Policy Development	Policy Development Process Outcomes and Provisions	Policy Convergence, Overlaps, Contradictions and Gaps	SLM Compliance, Coordination & Enforcement
1999	Existing Land Reform and Resettlement Policies and Laws limited to freehold areas leaving a legal vacuum in communal areas thus creating insecurity over tenure which discouraged rural development	The Communal Land Reform Bill introduced in Parliament. Voted against by National Council and referred back to Parliament for re-introduction. Allow user rights over communal lands, empower TA's and establishes CLB's	Relationship of district level CLB to regional CLB not clarified	Serious human resource capacity & infrastructural limitations hamper CLB operations
2000	Government realises that the decentralisation process was too slow and not producing tangible progress or benefits to the regional and local levels. It thus set about creating a conducive legal and financial environment for the decentralisation process. MLGHRD is tasked with the responsibility of taking the process forward and devise a Decentralisation Implementation Plan (DIP) through DPI Committee	The government enacted the Decentralisation Enabling Act (No. 33 of 2000), the Regional Council Amendment Act (No. 30 of 2000) and the Local Authorities Amendment Act (No. 25 of 2000) to facilitate and speed up the implementation of the decentralisation policy. Further, a Trust Fund for Regional Development and Equity Provisions Act (No. 22 of 2000), establishing a fund to finance technical and financial support to regional development projects, was passed.	The attempt by central government to control the speed, shape and direction of the decentralisation policy appear contrary to the spirit and letter of decentralisation which require locally driven development. No role is defined for Traditional Authorities in the decentralisation process whilst many policies on devolved function over natural resource uses co-opt them.	Decentralisation promotes participatory grass-roots democracy, in turn involving resource user actively in decision making. No legal or other mechanisms are in place to oblige line ministries to implement the decentralisation of their functions and structures to the regional and local levels.
	Recommendations by the NWRMR call for re-orientation of water resource management in accordance with IWRM and CBM principles	The National Water Policy was adopted by government promising equitable access, decentralisation of water resource management and introducing cost recovery	The policy is in line with decentralisation policy, CBN, devolution of powers and functions and integrated natural resource management	Strong emphasis is placed by the policy on coordination of land and water related activities.
	Budgetary allocation for Land reform proved inadequate to acquire farms and resettle beneficiaries at a rate matching demand or government targets.	The Agricultural Commercial Land Reform Amendment Bill was introduced making provision for the establishment of the Land Acquisition and Development Fund.	Despite sentential revenue generation through land taxation, the rate of land acquisition remains acutely inadequate vis-à-vis the demand for land.	Despite an increase in budget from 20 to 50 million N\$, acquisition of land remain sluggish and unable to satisfy land hunger
	The Forestry Policy needed revision to bring it in line with CBM principles and the national strategic goal of rural development targeting poverty reduction	Namibia Forest Development Policy (NFDPP) of 2000, a revised version of the Forest Policy of 1992 was adopted. It puts emphasis on novel intensive mixed farming methods	In concord with CBM approach and conservancy development by MET, FDP backs the sustainable use of forest areas for biodiversity conservation	
2001	Rejection of the original draft of the Communal Land Reform Act by the National Council necessitate its revision and re-introduction in Parliament	The Communal Land Reform Act re-introduced in Parliament with minor changes		
	Need to give legal backing to provisions of the NFDPP	Forestry Act, 2001 (No. 12 of 2001) was passed		
	The resettlement process is seen to benefit a narrow section of the society without relieving pressure on overcrowding in communal areas	Revision of the National Resettlement Policy brings no major changes other than revising the category of main target groups to include people from overcrowded areas	Despite revising deserving beneficiaries, the amendments fail to make explicit mention of farm workers or how they would benefit.	This revisions drastically increase the number of deserving beneficiaries and thus the burden on government
	Reluctance of farm owners to part with 'excessive agricultural land' combined with funding needs of the Land Reform/Resettlement process motivate land tax	Land Valuation and Taxation regulations as provided for in Act No. 6 of 1995 are introduced. Land is tax at 0.75% of its undeveloped value, increasing by 0.25% for additional farm		Due to administrative processes and relevant laws that needed amendments, land tax could not be implemented
2002	Rural development is held in check by lack of tenure rights and security to give impetus to investments	The Communal Land Reform Act passed by Parliament introducing various forms of leasehold rights.	The Act is silent on group rights in communal areas	
	It is felt that there was no overall policy covering land tenure issues across all forms of land occupation in the country as to ensure coherent approach	The Land Tenure Policy drafted. The proposed bill advocates group management for communal grazing.		The bill has not seen light and only remain in draft form

Year	Key Impetus and Events Leading to Policy Development	Policy Development Process Outcomes and Provisions	Policy Convergence, Overlaps, Contradictions and Gaps	SLM Compliance, Coordination & Enforcement
	Amendment Act No. 13 of 2002 to Agricultural Commercial Land Reform Act	The amendment provided for establishment of the Lands Tribunal.		
2003	The NLP and Communal Land Reform Act No.5 of 2002 mandate the government to institute Land Boards	Communal Land Boards established. One hundred and sixty-six members nominated in 12 regions to serve on CLB		
	Legal upheavals and challenges to expropriation of farms by the State as allowed for in Act No. 13 of 2002 cause considerable delays to acquisition of farmland	Amendment Act No. 144 of 2003 to Commercial Land Reform Act of 1995 introduced public interest as the only criterion for expropriation-	Public interest is not categorically defined or elaborated and is left open for arbitrary interpretation by the enforcing agencies. Creates uncertainties over tenure serving as disincentive to SLM and investments	Recent experiences show that issues like labour disputes could lead to expropriation of farms. Government need not consider SLM options in deciding to expropriate private farms
	NNFU/NAU joint venture: Emerging Farmers Support Programme.	First civil society initiative in Namibia in support of governments land reform programme. A joint venture project of the agricultural unions to support land reform.		
	Cabinet established the Permanent Technical Team on Land Reform (PTT) with support from GTZ	The PTT is constituted and embark on a consultative process with institution and enlisting consultants to investigate best land reform and resettlement options, their viability and feasibility. Consultant reports completed	Objective was to conduct studies in various broad areas of land reform to assess progress and to make recommendations covering cross sectoral policies on water, taxation & agriculture extension	All aspects of LR were viewed from a sustainable development perspective. By considering all land reform related issues and impacts on a holistic level, the PTT liaised and coordinated across sectors.
2004	New law on water resources necessitated by the findings and recommendations of the NWRMR	Water Act (No. 24 of 2004) was passed		Act in line with IWRM principals and integrated land management in general
	Government announcement of land expropriation programme.	Using public interest as the only criteria for land expropriation		
	PTT completed its findings after 15 months	Cabinet is expected to deliberate on the findings of the PTT and take decisions based on its recommendations		
	Four Namibian Government Ministries enter into an Agreement with GEF to address integrated ecosystem management strategies through CPP	Key components identified to be addressed through the CPP and PESILUP include building the capacity of systems, institutions and individuals, demonstrate SLM practices for replication and cross-cutting themes		The MAWF, MET, MLR, MLGHRD together with the NPC launch PESILUP to coordinate the combined actions of the partners in ISLM
2005	In spite of provisions for the adoption and incorporation of environmental sustainability criteria through the Environmental Assessment policy, no legislation is in place to them enforceable	Two bills, the Environmental Management Bill & the Parks & Wildlife management Bills are revised by MET. They remain in draft form with the Env. Mgmt. Bill having been handed to lawyers, and are yet to be enacted by cabinet	Both the Environmental Management Bill the Parks & Wildlife management Bill are specifically designed to fill gaps in environmental and natural resource management legislation and policies	It is hoped that the passing of the bills will allow enforcement of provisions in Environmental Assessment Policy that are presently not legally enforceable
2006	Forestry Act found to be inadequate in bringing about compliance with the NFDP and NFSP	An Independent Consultant is contracted to redraft the Forestry Act	Redrafting of policy is ongoing and will consider bringing it in line with other policy/legal provisions	New Act will ensure compliance with NFDP and NFSP provisions
	Need is felt for amendments to be made to the Water Act in its current form	Review of the Water Act and drafting of amendments initiated		Process is still in its initial stage and little is known about details

3.3 OVERVIEW OF THE POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

161. The main thrust of this policy analysis is presented in this section complemented by in-depth information presented in Appendix F. A brief overview of the outline of the Appendix is given to aid cross referencing as needed. The Appendix contains the substantive texts under sections.

3.3.1 Overarching documents, policies, plans and programmes

- The Namibian Constitution
- Vision 2030
- National Development Plans (NDPs)
- National Poverty Reduction Strategy (NPRS)
- International Conventions and Treaties

3.3.2 Sectoral policies and policy instruments organised under four thematic areas:

- (i) Land,
- (ii) Natural resources,
- (iii) Agricultural food production, and
- (iv) Decentralisation of governance

162. Analysis of sectoral policy and legal provisions as well as the institutional framework or capacity to implement and enforce them are presented under each thematic area. The policy overview under each theme provides a synthesised description of all relevant policies, the legislative and regulatory policy instruments as well as institutional arrangements in place to implement policies, with particular reference to SLM. A description of each policy cited under the various themes is also provided.

<p>Land Sector Specific Policies Land Policy Environment and Framework Legislative and Regulatory Land Policy Instruments Land Sector Institutional and Capacity Framework Land Sector Institutional Capacity and Gaps Policy Shortcomings for the Land Sector Land Sector Coordination and Overlaps</p> <p>Policies on Natural Resources Use and Management Policy Environment and Framework Natural Resource Legislative and Regulatory Instruments Institutional and Capacity Framework Natural Resource Management Institutional Capacity and Gaps Shortcomings of Natural Resources Policies and Laws Natural Resource Coordination and Overlaps</p> <p>Policies on Agriculture and Food Production Agriculture Policy Environment and Framework Legislative and Regulatory Instruments Agriculture Institutional and Capacity Framework Agriculture Institutional Capacity and Gaps Shortcomings of Agricultural Policies Agricultural Sector Coordination and Overlaps</p> <p>Policies on Governance and Decentralisation Policy Framework Decentralisation Legislative and Regulatory Instruments Decentralisation Institutional and Capacity Framework</p> <p>Social, Demographic, Health, Economic and Trade Context Social, Demographic and Health Impacts Opportunity and Transaction Costs</p>
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3.3.3 Opportunities and Constraints of Present Enabling Environment Framework

Devolution of Management Rights and Responsibilities: Realities

Policy Convergence

163. Almost all post independence policies and ensuing legislative instruments are unanimously in tune in addressing and taking concepts of sustainable development on board as well as recognising the need for active community level participation in the sustainable management of land and related natural resources. **A majority of policies and laws advocate and legislate for the devolution of decision-making and managerial powers over the natural resource base to local levels and individuals.** Central to this approach is a universal understanding primed on accountability and economics which holds that local communities and individuals will only take due care of the natural resource base if they have a sense of owning such resources and in a position to reap tangible economic and social rewards from doing so. Moreover, the devolution of central government functions and services is considered a process of democratisation that brings governance closer to the people where it is more responsive to people's daily needs and wants.

Institutional Overlaps and Contradictions

164. A basic enabling environment for the pursuance and implementation of ISLM exists in Namibia. **What seem to have been rare is the translation of the rhetoric on sustainability and devolution contained in policies and laws into widespread practice countrywide. Capacity constraints, shortage of personnel and resources all seem to be contributing factors, but lack of political resolve as well as uncertainties at institutional level over the line of command in devolved functions all are underlying reasons.** Line ministry representatives on new regional or local decentralised bodies remain accountable to their sectoral heads rather than to the structures they serve on in most cases. **The biggest challenge to integrated and sustainable land use management is perhaps posed by the universal tendency amongst all government sectors to replicate their sectorally segregated structures and approaches down at the regional and local levels.** Both the MAWF and the MET have made considerable progress in devolving powers and empowering community members through the CBNRM approach to local committees based on similar principles, matching institutional frameworks and a shared underlying philosophy to community-based management, yet between the two ministries, three separate CBM committees have been established. These include the Water Point Committees (WPC), Community Forestry Committees (CFC) and the Conservancy Management Committees (CMC) (Figure 8) all functioning independently of each other. In addition land management legislation establishes Communal Land Boards (CLB), Land Use and Environmental Boards (LUEB) and Land Tribunals. **Despite the worrying absence of coordination, merger or consolidation of what are obviously complimentary and at times overlapping responsibilities of these many statutory bodies, they are supplanted on top of and supersede pre-existing social arrangements and traditional authorities (TA).** This may potentially complicate or confuse roles, managerial oversights and jurisdictional responsibilities which could potentially be detrimental to SLM in the long-term.

165. **A common aspect and trend of recent policy development has been the tendency for every sectoral policy or Act of Parliament to institute additional statutory bodies with roles varying from administrative, regulatory, advisory and adjudicative functions (Table) in isolation from existing ones by other sectors. Figure 8** clearly shows a cluster of proposed regulatory and advisory bodies at national level accompanied by a thin spread of linked institutions at regional or local levels. Similarly, decentralised natural resource use structures concerning wildlife and forestry have local and 'district or constituency' as well as national level structures in place while leaving gaps at regional level. The apparent replication of statutory bodies to take up different roles, which in some instances can easily be amalgamated, is also noticeable within sectors.

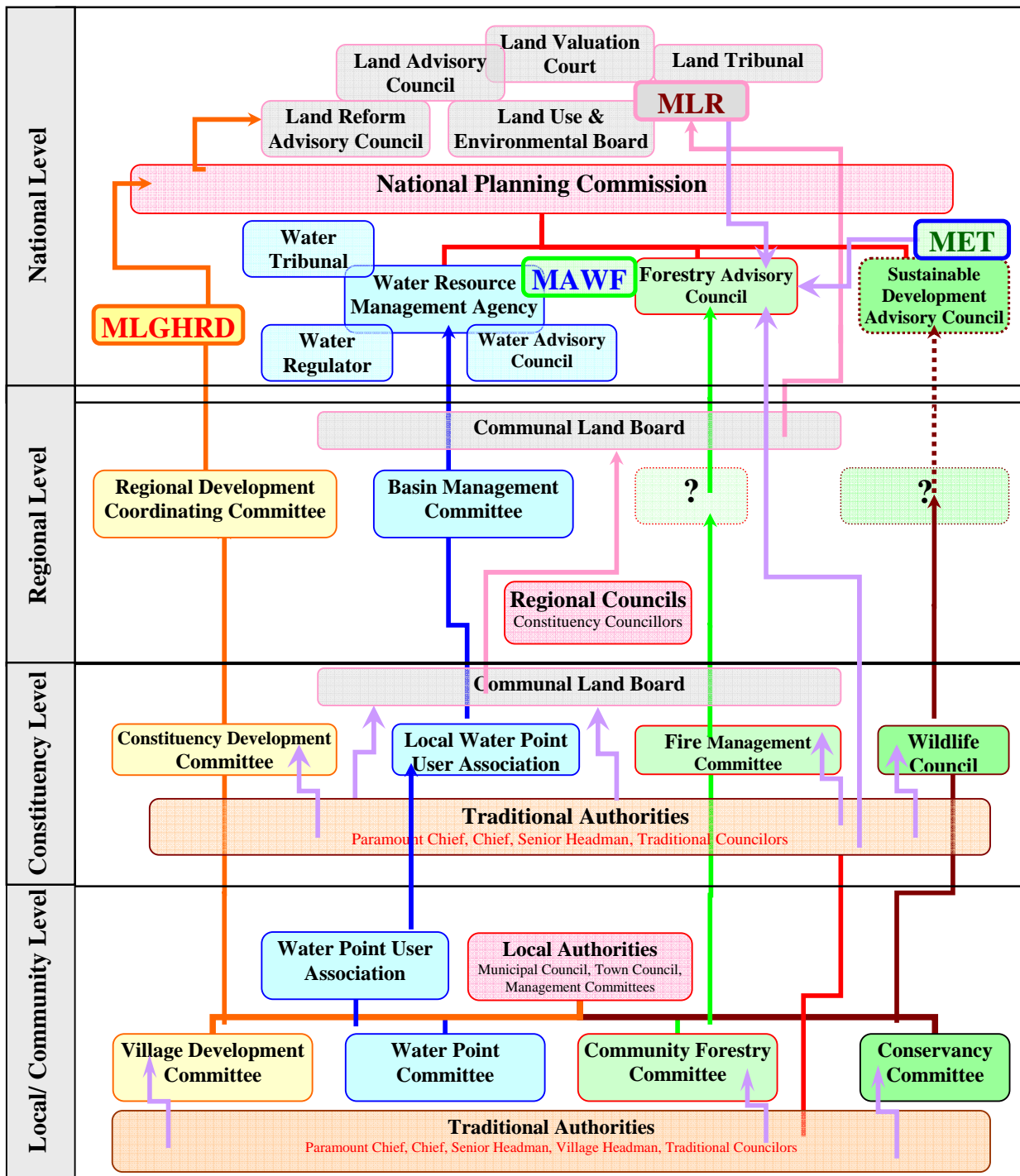


Figure 8: Chain of command in land related decentralised sectors at different levels of government. Dashed lines represent non-existent or proposed institutions. Purple arrows indicate representation of an institution on a body constituted by another sector.

166. **Although such structures may have clearly defined roles and mandates spelled out in the sectoral policies and legislation that establish them, little consideration seems to have been given to the relations of such bodies to each other within sectors and across the sectoral divide.** With the exception of TA serving on the Village Development Committee (VDC), Constituency Development Committee (CDC) and the Communal Land Board (CLB), **no clear horizontal relationship or integration exists amongst sectors at the different levels of government (Error! Reference source not found.)**. Moreover, the upcoming Environmental Management Bill proposes a Sustainable Development Advisory Council (SDAC), akin to the LUEB in duties and functions. Whilst representation or replication of all sectoral institutions at all spheres of governance may not be essential, it is critical to ensure the deliberation and incorporation of all land-use concerns at all levels of decision making through the chain of command. Thus to bridge the apparent institutional gaps, there could be a need to broaden the representations on existing organizational set-up. Unfortunately, the scarcity of skills and shortage of human resource capacity, especially at local and regional levels, result in the same people serving in many bodies, thus negatively impacting on the efficacy of the positions and the institutions they serve. In the long-term, it is more effective to expand training and capacity building.

167. A number of field-based initiatives, approaches, activities and programmes promoting inter-sectoral coordination and cooperation as well as the harmonisation of varied developmental or land use interests with a degree of success at the local level exists. Notable amongst these is the Forum for Integrated Resource Management (FIRM), the few established basin management committees (BMC's) and initiatives to integrate conservancy and community forestry in Okavango and Caprivi regions. Policy and legal initiatives are being contemplated to facilitate the latter. BMC's are constituted by representatives of a broad spectrum of resource users and decision-makers including various line ministries, municipalities, mining interests, private and communal farmers, but unfortunately the institution of BMC's has not seen the same success as conservancies and community forestry committees. By nature and also as legal pre-requisite, conservancies and community forests promote integrated land use planning and sustainable natural resource utilisation by integrating the holistic management of wildlife, forestry and rangeland, thus promoting SLM. Arguably the successes of conservancies and community forestry derive from the direct and almost immediate tangible benefits available to local people through sustainable wildlife and forestry management. The benefits of sustainable land management in areas that are not blessed with wildlife or forests are at best long-term and not immediately obvious to the local resource user. **Hence an innovative set of incentives (Chapter 4) need to be devised for local land managers not enticed by direct benefits.**

168. Most post-independence policy initiatives in Namibia are specifically aimed at restoring a sense of ownership of, and control over natural resources such as land, wildlife and forests to the communities from which they were alienated by the state in the past. This is seen as an essential undertaking to ensure long-term sustainable use and management of all natural resources. **Unfortunately, such efforts are not only duplicated within and across sectors, but they more than often duplicate existing and recognised tribal leadership structures by imposing new committees that end up competing with tribal authorities for influence.** A need does exist for greater power and authority to be vested in incorporated local structures to control the utilisation of natural resources.

169. This does indeed pose a serious socio-political challenge of striking a workable balance and integration laterally amongst the different local committees of one or neighbouring communities as well as vertically amongst the various spheres of government at local, district, regional and national structures (Figure 9). Adjacent local communities may share a common natural resource such as grazing, forests or water in case of shared supply scheme or even riparian communities along rivers (both perennial and ephemeral) and may therefore need to amalgamate local levels structures to cater for shared interests in a natural resource. **Clear land use planning procedures can facilitate participatory processes, broad stakeholder consultation and negotiations, in this regard.**

Erosion of the Role and Powers of Traditional Authorities

170. Although many sectors have the necessary legislative tools and organisational set-up in place to implement community-based natural resource management approach, the land sector is yet to match advancements made by other sectors, particularly with regard to tenure reform and administration of communal land. Existing policies and laws are at best ambivalent about local level jurisdiction over land and its administration in general at the lowest level. **Recent policy changes in Namibia as manifested in much of post-independence legislation seek to effectively transfer the power over allocation and use rights in communal lands from orthodox tribal authorities to proposed local and regional level institutions, which may have veto power over traditional authorities' allocations of land.** Tribal influence is prevalent at all community levels from village to constituency and regional sphere with a chief being assisted by senior headmen who represent the major villages (see Chapter 4; stakeholders and power relations). Smaller villages have headmen or foreman representing them in the hierarchy of tribal authority. However, the **legislation provides for establishment of CLB at regional or district level with no provision made for village level land administration.** TA's are empowered by the legislation administer customary land rights farming and residential units, but the law is not explicit on the management of commonage such as grazing areas. It is also not clear whether representation of TA on the CLB will be based on area (village), tribal or clan affiliations since some areas have more than one TA.

171. **Post independence legislation may have an unintended detrimental effect on community participation in decision-making and local governance (Werner, 2002) in that it leads to the establishment of formal institutional arrangements that are not wholly inclusive of traditional decision-making processes.** As democratic elections of community members to various community based institutions is a prerequisite in many instances, tribal authority representation is not always guaranteed. **Institutions that may have considerable decision-making powers over land and natural resources are thus likely to exclude some or all local traditional leadership.** Not only do modern socio-political and developmental bodies tend to erode the power base and influence of tribal leaders, but legal provisions in the Communal Land Act would deprive them of a reliable source of income by proscribing the collection of revenue from land allocations. **Antagonism, power struggles and efforts at undermining each other could thus easily ensue between the different new institutions and the tribal leadership as they vie for local influence, potentially undermining SLM activities and interventions.**

Top-down Policy Development

172. Although the speed of policy development and legislative promulgations are to be commended, most policies and regulations have unfortunately not been rooted in the existing and functioning socio-economic interrelationships, structures, usages and customs on the ground. **The entire processes of policy formulation, review and implementation is largely centrally driven with very few policies initiatives emanating from grassroots levels and this generally results in policies lacking local content and not always relevant to local level issues.** To this end, long established social contracts and practises within communities vis-à-vis especially user rights over land and natural resources were not always integrated into formal law. **Instead new 'community-based' structures are founded on alien concepts, rules and practise (from the community perspective) and mostly supplanted on top of existing arrangements, creating potential conflicting interests in a few instances.** It becomes imperative for new institutions to ensure the incorporation of local leadership as well as reflecting community norms and decision-making processes closely in their functioning. On the other hand, traditional authorities will need to become more inclusive and transparent in their decision-making to ensure that they always act in the best interests of their communities. There has indeed been some case where TA's, clearly encouraged by the potential benefits, initiated the establishment of conservancies and community forests and are strongly involved in their operations.

173. The procedural, legal, social and economic requirements for **the establishment of local community institutions are extremely complex** for the average rural community, more than often needing considerable input from national institution to bring them about. In addition, the requisite **terms** of office for members serving on such bodies are **not always compatible with locally available human resource capacity or established practices**. As result of the 'impossible' practices and procedures required from largely illiterate rural dwellers for the efficient functioning of new structures such as democratic elections, drafting of constitutions, revenue collection, book keeping, regular meetings and taking of minutes, **many committees do fail to function and execute their duties effectively**. In some extreme cases this lead to their dissolution and disbandment to leave an institutional and legal void in the implementation of devolved natural resource management. These factors may in part explain the difficulties government has in enforcing most of the new legal provisions on land and natural resource use in communal areas.

Variance in Understanding and Implementation of Policy Locally

174. While its is expected of local rural communities and farmers to attune their natural resource use habits and land management practices in line with new policies, laws and regulations, the legislative environment is hardly known to them. Rural dwellers are not always overly aware of the policies and laws that govern their utilisation of natural resources. In cases where policies have been made available, the **rural communities have difficulties comprehending the provisions of policies and laws**. The recent NCSA (MET, 2004) survey collated a number of complaints about the lack of translated versions of policies and legislation in local vernaculars. However, **the most problematic aspect concerning the understanding and implementation of policies or enforcement of laws is that many government officials manning regional offices and the people serving on new structures such as CLB's, VDC and others have little understanding of their roles, duties and responsibilities while many misinterpret their roles and functions**. Other than the language barrier (documents being in English), the technical language is not only difficult to grasp, but equally problematic to translate in local vernaculars in which the concepts and terms are non-existent. Lack of understanding, poor understanding or mis-understanding of policies, duties, roles and functions is not confined to local level institutions but pervades all levels.

Lack of Real Power and Mandates to Enforce SLM

175. Despite clear statutory roles, mandates and the promise of human resource development or capacity building embraced by many policies and laws, **little has happened on the ground to impart the necessary skills for fluency in managerial and operational functions**. The influence and sway of most of the statutory bodies proposed in policies and legislation in ensuring sustainable land use practices are curtailed by the advisory and regulatory nature of their mandates which does not include enforcement. **No single agency has been provided for to legally enforce all the SLM friendly legal provisions and policy directives**. Current arrangements would make imposition of SLM and other environmental friendly directives cumbersome. Should company X wish to acquire land in a communal area on which to set-up an industry that consumes large volume of water and would produce extensive effluent, it would have to apply to the CLB for land allocation, obtain EIA clearance from MET, get approval of its land use plans by the LUEB/SDAC and obtain a licence or permit to abstract water and discharge effluent from the WRAC. It could be beneficial if one dedicated government or semi-autonomous agency can handle the entire process of ensuring environmental sustainability through the application of SLM principles and carry out inspections to ensure compliance with licence conditions as well as having the necessary authority and capacity to enforce regulations in case of breach of environmental provisions.

176. At least clear guidance on what would constitute a breach of environmental conditions, i.e. through a set of broadly accepted environmental criteria under a national SLM standard could greatly enhance the decision making capacities of currently existing institutions in the medium-term. There is a window of opportunity for a project intervention

such as PESILUP to have immediate impacts on improving the enabling environment for SLM through such targeted interventions (Chapter 5).

Contradictory Approaches and Practices

177. There are **apparent contradictions amongst different sectoral policy statements concerning the use of land in meeting government objectives**. The MLR ascribe the role of 'seeking to secure and promote the interests of the poor' to government in resettling people on land whilst the MWAFF is chiefly concerned with 'using the land to maintain and increase the productivity of the agricultural sector'. These objectives cannot always be mutually inclusive and may result in contradictory approaches and practices towards land management by the respective government ministries.

178. **Even though the CBNRM and Community Forestry policies are premised from a convergent doctrine** of empowering the resource user to manage natural resources sustainably, their respective policy cycle pathways have developed in isolation with **no synchronized feedback or consultation on matters of mutual interest and the final versions are therefore not formulated to be mutually supportive. CBNRM policy and programs give exclusive prominence to wildlife related land uses and management to the exclusion of other complementary land issues central to SLM**. Areas where wildlife has been disseminated or where wildlife is perceived as a nuisance may thus be excluded from CBNRM programmes and benefits. However, following recommendations by the PTT, the 7th Cabinet meeting of 2006 by the Fourth Government of the Republic of Namibia approved the expansion of community-based policies on resource management beyond wildlife and tourism to incorporate other natural resources like water, land and land-based economic activities. This represents a major policy shift by government and is indeed a very positive development in terms of ISLM. The same Cabinet note of 17 May 2006 (ref. 12//26) encourages integrated resource management in terms of water, sanitation, and drought mitigation strategies through collaboration between various Ministries, namely MET, MLR and MAWF, thus laying a legal platform for ISLM.

179. The **National Land Policy (NLP) and the accompanying Land Act are solely crafted around the ownership, allocation and administration of land while not adequately addressing the use and management of both land and its associated natural resources**.

180. The Directorate of Forestry (DoF, MAWF) and other environmental stakeholders in both the public and civic sectors strongly advocate the planting of trees to replace vegetation from deforested areas and create carbon sinks whilst the water sector is principally opposed to such practices. Objections by the latter sector stem from the use of scarce water resources for irrigation of trees as well as the negative impact of trees through evapotranspiration on groundwater resources. A donor funded project that assisted rural farming communities in the northern regions with provisions of water for livestock, Northern Regions Livestock Development Project (NOLIDEP) operating within the ambit of the Directorate of Rural Water Supply (DRWS) had different policy on the siting of boreholes relative to each other as compared to the official DRWS standpoint. The DRWS sets a minimum distance of 7.5 km between adjacent boreholes whereas NOLIDEP requires a distance of 20 km. While these differences are not contradictory, they illustrate disparate set of guidelines based on different considerations within what is essentially one single sub-sector. The distance adopted by DRWS is possibly based on geohydrological considerations of minimising the overlap of depressed potentiometric surfaces (cones of depression in the water table), which may accelerate groundwater draft and aquifer depletion. On the other hand, NOLIDEP may base its distance purely on the potential environmental impact of livestock watering (the piosphere effect) which leads to radial denudation of vegetation around water points. **These deficient policy and practical issues demonstrate the potential of such subtle differences to lead to major policy differences and contradictions within and amongst sectors, with contrasting impact on SLM and natural resources**.

181. **Practise has demonstrated that good intentions, policies and laws around sustainable land use planning are secondary to political considerations and the need to maintain the peace.** Government machinery has been less than zealous in evicting illegal occupiers and settlers on farms meant for resettlements, taking down illegal fences in communal areas or confronting farmers invading grazing areas. Recent newspaper reports suggest that the Mangetti farms are to be sub-divided into smaller units to accommodate more farmers, with the need to satisfy land hunger and quell an explosive situation taking precedence over prudent land use planning. In an attempt to stem rural-urban migrations, government is reportedly encouraging youths to take up farming in rural areas by subdividing grazing grounds traditionally reserved for emergency grazing into smallholding for young farmers to cultivate (MET, 2005). This ultimately leads to rapid clearing of land, removal of all trees, loss of biodiversity and accelerating land degradation.

Uncertainties

Jurisdictional Uncertainties

182. A confusing sequence of vertical roles, functions, interrelations and lines of accountability emerges from the creation of many sectoral as well as multidisciplinary statutory bodies and organs especially around natural resource use, management and regulation. Such jumbled institutional arrangements do not only lead to possible **overlaps and duplications of duties**, it also creates uncertainties amongst those serving on the institutions as to their mandates and remits. **Inability amongst members of new statutory structures to read and understand policy and legal provisions governing their roles added to an absence of training and capacity building, creates a lot of uncertainties amongst such members concerning their roles, powers and functions.** Moreover, questions about the relationship of new structures to other institutions and jurisdiction remain unresolved. Such uncertainties give rise to shifting of responsibilities and failure to act in implementing mandates.

183. Examples of shifting responsibilities and blame resulting from lack of clarity of roles to Traditional Authority representatives on CLB are related by Kakujaha *et. al.* (2004). Though a limited project like PESILUP could not hope to address all the levels and structures of land and natural resource management institutions to the same degree with an equal measure of success, the development and introduction of SLM will have to identify the effectual entry point in terms of institutional levels where its impact will be greatest.

Uncertain Tenure

184. The absence of a fixed timeframe for the conclusion of the redistributive land reform process in combination with the prospect of expropriation generates a climate of uncertainty detrimental to SLM within the freehold areas. Private farmers are less inclined to invest heavily in long-term sustainable land use measures. Insecurity of tenure over land in communal settlements is a disincentive to the sustainable management of land or resources.

Table 11: Land related formal institutions and structures proposed in policies or established by law, their functions and services at different levels of government

Sphere	Sector	Formal Role	Land and Natural Resource Related Structures & Institutions	Legally Assigned Official Powers, Functions, Tasks, Duties and Responsibilities	Current Status
National Government	Land	Planning, Regulation & Arbitration	Land Use Environmental Board	Promote and assume roles over LUP, natural resources, land administration & environmental protection nationally	Proposed ~NLP Not in place
			Land Tribunals	Handle potential disputes over the valuation of farmland	To be instituted least disputes over valuation / allocation arise
			Land Valuation Courts	Hear appeals against valuations of land	
			Land Adjudication Commission	Oversee land allocation in communal areas	
			Land Reform Advisory Commission	Recommends partition plans for the subdivision of farms and land acquired by MLR to the Minister of MLR.	Est. by Act No. 6 of 1995
	Water	Administer	Water Resource Management Agency	Not clearly defined or how it differs from Admin Agency	Not in Place
			Water Tribunal	Hear appeals vs. decision around water emergencies, the granting /refusal of permits/licences & claims of safety risk	Est. by Act No. 24 of 2004
			Water Regulator	Fix charges/fees for water use/effluent disposal, evaluate acquisition or divestiture of a WS/effluent disposal system	Not in place
	Forestry & Wildlife	Advisory	Water Resource Administrative Agency	Integrated management of water resources, analysis of permit and license applications & renewals. Collect, share & analyse water data. Monitor & review water usage & discharge of effluent. Assess needs & establish Water Protection Areas. Guide, assist & coordinate BMC's and contribute to development of National Water Master Plan	Allowed to be appointed by Minister under the Water Act No. 24 of 2004. Not in place
			Water Advisory Council	Advise Minister on water resources and policy matters as well as matters raised by any BMC	Act No. 24(04). Not in place
Regional Government	Forestry & Wildlife	Regulatory, Advisory & Administrative	Forestry Council	Advise Minister of forestry related matters including legislation, policy formulation & implementation. Give anyone advise, assistance & information on forestry	Enacted by Act No. 12 of 2001 Not in place
			Fire Management Committee	Devise fire management plans including for the conditions on burning. Prevent, control & fight forest and veld fires.	Proposed ~Act No. 12 of 2001
	Water	Regulatory, Advisory & Administrative	Wildlife Council	Ensure that benefits from conservancies reach others in area who are not members of the conservancy.	Provided for~ Act No.5 (1996)
			Regional Water Tribunal	Perform delegated Water Tribunal duties at regional level	Not in place
			Basin Management Committee	Promote community participation, prepare the basin water resource plans, recommend issuing of permits, promote self-reliance and cost recovery, facilitate operation and management systems, monitor policy implementation	Allowed under Act No.24 ('04). Only three pilot BMC's in place
	Land	Regulatory, Advisory & Administrative	Local Water Point User Association	Coordinate management of rural water supply schemes shared by various WPUA's	Est. in few areas/villages
			Communal Land Board	Control, allocate and cancel customary land rights, advise the Minister of Lands, consider & rule on applications for leasehold, keep register of customary land transactions	Established in 12 regions safe Khomas
Local Government	Development	Planning	Regional Councils	Exercise powers over communal land, manage & control settlement, undertake regional planning & development	Elected every 6 years
			Regional Development Coordination Committee	Consolidate development needs, identify and prioritise regional development projects for submission the NPCS	In place in some areas, but not always functional & non-existent in other areas
			Constituency Development Committee	Consolidate development needs, prioritise constituency development projects for submission the RDCC	
	Water	Regulatory & Administrative	Village Development Committee	Identify development needs and prioritise village or local level development projects for submission the CDC	
			Local Councils	Exercise executive power over local areas, elect mayors and management committees to advise them	Elected every 6 years
Wildlife	Regulatory & Administrative	Water Point Committee	Run the day to day management and operation of water points as well as the administration of financial activities on behalf of the Water Point User Associations	Est. for most but not all	
Water Point User Association		Determine rules for water use, allow others to use water, prevent wastage and exclude non-compliant water users	Est. in few areas		
			Conservancy Committee	Ensure the sustainable management and harvesting of game and natural resources. Share and distribute benefits amongst conservancy members.	Exist in areas that formed a conservancy

3.4 RECOMMENDATIONS

3.4.1 Short-term Interventions

Summary of priorities:

- In spite of a conducive and enabling policy or legal framework and an extensive institutional set up for sustainable management of natural resources, concrete implementation of SLM and LUP on the ground is lacking. A positive aspect of the present and evolving policy and institutional environment in Namibia is the creation of the legal and organisational foundations for sustainable management of common resources, thus promoting SLM or the implementation of LUP. Immediate measures that would help strengthen the capacities of resource managers are needed.
- It is recognised that clear LUP procedures and a fully revised LUP Policy including environmental sustainability as an important element can catalyze political changes. It is recommended that the work proposed in this document be clearly linked to the LUP Policy redrafting process.
- A paradigm shift away from the creation of new additional structures and institutions especially at local level and the imposition of such structures on community towards an approach that builds on and strengthens established customary institutions and structures is needed.
- Sectoral and cross sectoral duplication of structures and institutions, local, regional and national level need to be urgently addressed as priority before more parallel bodies are created in new legislation.
- There is an urgent need for a speedy resolution of the political, administrative and capacity constraints that have thus far kept progress with decentralisation and devolution of resource management rights and responsibilities. It is important to enable decision makers to assume managerial powers over natural resources and thus responsibilities for devising and implementing sustainable land use practices.
- The establishment of or support of existing bodies and structures legally required to fulfil certain natural resource management functions will help ensure that such essential actions [for SLM] are undertaken. The imposition of deadlines and time-tables for the development of Decentralisation Action Plans by line ministries and their implementation may go a long way towards concretising devolution of government functions.
- A need exists for a more refined and detailed systematic and scientific re-evaluation of what constitute an economically viable farming unit in all the different AEZ's in the country based on the intended farming practices and its intensity of land/natural resource usage. The development of site-specific regulations, approaches and practices tailored to agro-ecological conditions is possibly the most effective means of ensuring SLM in Namibia. This indeed is the design adopted in PESILUP that will inform Namibia's SLM agenda.

CPP for ISLM and PESILUP contributions

- The CPP for ISLM is the umbrella for a suite of targeted project interventions that facilitate the capacity building of local level resource users and managers for SLM. PESILUP is one such an intervention. It is recommended that the project places a strong emphasis on (i) the development of LUP tools in support of SLM (Chapter 6), (ii) strengthens the capacities of local, regional and national stakeholders for applying LUP procedures (Chapter 6), with a special emphasis on responding to stakeholder realities and power relationship (see Chapter 4), and promoting the negotiating capacities of resource managers.
- The development of broadly agreed to environmental sustainability criteria through PESILUP would support the decision making capacities of institutions such as the CLB, in the medium term, in the absence of one dedicated agency that would necessary authority and capacity to enforce regulations in case of breach of environmental provisions in term of land use contracts.
- The development of such criteria has even a lot more wide ranging implications and would create further opportunities, elaborated on in Chapter 5 and 7, in particular.
- PESILUP is a project with limited resources. It is thus important to engrain the planned interventions in the longer-term and more "weighty" CPP umbrella. Whereas PESILUP

seeks to pilot the development of tools and capacity plans at a limited number of sites, the CPP and in the long-run mainstream government actions ought to facilitate the up-scaling of the products.

- Whereas PESILUP can feed lessons learnt and experiences into the improvement of the enabling framework i.e. in terms of the decentralisation policy, the CPP for ISLM has strong negotiating powers to influence such practical policy responses. This holds specifically also true for revisions on the draft LUP Policy.
- The proposed national assessment (Chapter 2) is designed to contribute to the systematic and scientific (re-)evaluation of what constitutes an economically viable farming unit in all the different AEZ's, incepting explicit environmental sustainability considerations. In an arid to semi-arid country like Namibia, it is clear that economic viability of land uses is strongly affected by the available natural resource base i.e. environmental conditions.
- Important policy considerations revolving around the promotion or sustainable management of urbanisation and the addressing of environmental problems potentially aggravated through such a process should be considered systematically. A special study in this regard could be helpful and elements be integrated into the design of LUP interventions as outlined in this report.

3.4.2 Long-term Considerations

Summary of priorities:

- There are as many ambiguities and contradictions in policy pronouncement and legal provisions as there are new policies and laws. The ambiguities in policy and law need to be clarified as they impact directly on people's willingness and ability to invest in and practice integrated sustainable land management.
- There is a need to explicitly demarcate and define, by further proclamations, the level of Traditional Authority with powers to allocate land as well as the relationship between regional CLB and CLB specific to certain communal lands in cases where a region comprises more than one block of communal land. The ambiguity of the position and role of traditional authorities resolved to clarify roles. A need exist for the harmonisation of traditional customary jurisdiction and structures of the new dispensation.
- The apparent contradictions within the policy documents on extension services and agricultural aid to the Affirmative Action Loan Scheme (AALS) and resettlement beneficiaries may need to be ironed out if needed support and aid is to be guaranteed to emerging farmers, impeding on SLM.
- In order to take full advantage of the existing wealth of skills, capacity and expertise available within diverse structures of government to help other entities (e.g. ministries) that lack such capacities, government could consider the establishment of a separate vote in its budgetary allocations that will specifically cater for and fund cross-sectoral cooperation and coordination including sharing of skills.
- Intended devolution of power and functions over water point maintenances and operations to the lowest local level may have had the opposite effect in some cases where inability to contribute a user fee has led to exclusion of some members, the break down and dysfunction of water points as well as further impoverishment of the poor who are forced to sell their livestock in order to pay (PPA findings). The unfortunate flipside of this is that it is the poorest of the poor whose access to clean water may be compromised and undermined by an inability to contribute towards operation and management cost. Cost recovery approaches through the CBM of water points could thus be counter to the government policy of equitably providing water of sufficient quantity and quality within a reasonable distance. To this end, some policy review and rethink of the CBM approach and cost recovery concerning water, which may include a subsidized basic quantity of water to the very poor, marginalised and vulnerable groups is necessitated. Clear guidelines on the criteria for determining individual or groups of people deserving of subsidized water supply becomes necessary to avoid abuse.
- The lack of representation by established and emerging prominent land user groups such a Community Forest Committees, WPUA's and farming cooperatives on CLB puts them and their interest at a disadvantage vis-à-vis other land users such as conservancy

committees that are represented¹⁷. To this end their interest and the type of land use option they advance may be defeated. On the other hand, over representation of interest on CLB makes it more difficult to reconcile all interests thereby complicating and prolonging the decision making process by the boards (Kakujaha et. al, 2004). An amicable compromise may call for the elimination of the representational composition of CLB to be replaced with directly elected or appointed individuals who meet certain criteria and qualifications. Such directly elected or appointed CLB members will be directed to consider all cases purely on their environmental, jurisdictional, technical and legal merit without defending or promoting vested interests. Such a drastic departure from the status quo may require the appointment of people with no land use interests in the areas of their jurisdiction to CLB's.

- Most legal and policy documents governing the constitution, functions and duties of land and natural resource institutions such as advisory councils, tribunals and boards are written in highly technical language. Combined with the fact that they are in English, these documents and the rules, functions and duties they prescribe are beyond the comprehension of ordinary citizens, especially rural representatives. Yet, a majority of natural resource management institutions such conservancy committees, Forestry Advisory Council, CLB and VDC's require representatives of traditional authorities as part of the constituent members. Kakuhaja et. al, (2004) elucidated the chronic educational and linguistic handicaps of Traditional Authorities that encumber their meaningful participation and contribution in meetings of statutory bodies on which they are represented, but more than anything, Traditional Authorities are not well resourced in terms of human capital to fulfil their obligations on the multiplicity of bodies on which they are meant to serve. At most, Traditional Authorities will have one or two literate members to delegate to such bodies as representatives. They may be overstretched as one too many bodies require their presence. There could thus be a need to limit TA representation to bodies where they are likely to make meaningful input and wield tangible influence.
- Instead of the many parallel regulatory bodies as proposed or already constituted under the various policies and legal instruments to preside over and arbitrate on land acquisition compensations, land allocations, land valuations for taxation purposes, disputes over water, forest management and others, it may potentially be more workable to constitute a single Land and Natural Resource Use or Management Agency (LNRUMA) at the national level with regional and local offices where necessary in the interest of a holistic integrated sustainable land use management. It will be imperative and more effectual for the powers of such an amalgamated environmental agency to go beyond mere advise, regulation or arbitration and include regular inspections, monitoring as well as enforcement. Large scale land and natural resource users such as mining operations, factories, bulk water suppliers, commercial forestry and large irrigation schemes could be obliged by law to submit regular updated reports on monitoring of SLM parameters such abstraction rates, water and effluent quality, soil chemistry, biological oxygen demand (BOD) of wetlands, biological indices and others to the agency. The agency should still retain its own capacity to carry out inspections and verify such reports. This would streamline the procedures for regulation, monitoring and enforcement of SLM and environmentally sound development. This is not a call for the abolishment of sectoral and local level institutions concerned with land use management and environmental protection, but rather an advocacy for the coordination and consolidation of especially consistent enforcement of SLM principles in all land and natural resources uses.

¹⁷ Recently the amendment of the Communal Land Act was officially recommended to address the representation issue on CLBs (National Induction Conference for new CBL members and staff, 07-12 May 2006, organize by MLR with support of the GTZ). Relevant proposals are currently being drafted.

Chapter 4

4 An initial Land Use Planning (LUP) stakeholder and power analysis: rights, responsibilities - incentives and disincentives for SLM

4.1 INTRODUCTION

185. Stakeholder analysis provides insights into who has stakes (rights, responsibilities and interests) in land and natural resources planning and management either as an established regulatory or decision-making body by law or as a user. It also helps shed light on the power relations amongst different groups and individuals, which can strongly impact on whether resources are managed sustainably or not. Understanding of stakeholder interactions and current power patterns can greatly facilitate the planning of strategic interventions. IUCN (Barrow et al., 2002) has published a powerful analysis of stakeholder and power relations in forest management in southern and eastern Africa. A similar approach is taken in this context of planning integrated PESILUP and CPP for ISLM support activities. It is important to know and understand (i) the identity of the institutions/individuals with land use planning related mandates, (ii) their roles, (iii) stakeholders with land and natural use planning and management interests who are however are being excluded from decision making, (iv) how a meaningful devolution of decision-making powers can be instituted at the lowest user/managers level, (v) the type of power relation that would enable SLM and (vi) the incentives or counter-incentives present – or could be developed - to foster stakeholder engagement in and commitment to SLM, amongst others.

186. In the Namibian context two different contextual perspectives have to be realized: (1) land use planning is intractably interlinked with land tenure and tenure reform, and with sustainable land management relevant frameworks, and (2) the contextualization of power relations differs in (i) conservation areas, (ii) communal lands and on (iii) freehold properties. Whereas decision making about land and natural resource use and management on a freehold property are relatively simple, understanding inter-community relationships is extremely important in communal areas.

187. It is the purpose of this Chapter to offer an initial introduction to the topic of stakeholder analysis and incentive setting in the context of land use planning and sustainable land management in Namibia. Although this initial analysis is at this stage only peripheral, the raised and contextualised issues are important to the planning of interventions, such as elaborated especially in Chapters 5 and 6.

188. It has been recognised that the method of systematic stakeholder analysis explored in this chapter could ultimately become a standard practice in the preparation of projects and other interventions.

Box 7: Organisation of Chapter 4

The Chapter is organised in the following sequence:

1. Analysis of Stakeholders and their Resources in Namibia (4.2)
2. Incentives for ISLM in Namibia (4.3)
3. Addressing Power Relations and Trade-offs (4.4)

4.2 STAKEHOLDERS AND THEIR RESOURCE POWERS

189. Many individuals with wide ranging and differing livelihoods translating into varied land and natural resources use objectives, co-habit and co-manage land units. On top of this multilayered maze of dissimilar individualized or household needs, wants and objectives, a

number of imposed institutions have been put into place through various policy instruments impacting on decision making. The policy analysis in Chapter 3 highlights the various institutions with land and resource planning interest on local, regional and national levels, established through sectoral policies mandates. Ministries with relevant mandates include the Ministry of Local and Regional Government, Housing and Rural Development (MLRGHRD), the Ministry of Lands and Resettlement (MLR), the Ministry of Agriculture, Water and Forestry, and the Ministry of Environment and Tourism (MET). The specific mandates, roles and capacity constraints of each Ministry to fully meet their mandated objectives are elaborated in Chapter 6. The following sections examine existing stakeholder associations relating to land management, land use planning and land reform at (i) the local level, (ii) the regional level and (iii) at the national level in Namibia. Institutional arrangements operative or planned at all levels are reviewed and their power relations examined.

The local level – communal area context

190. In communal areas, on the local/community level, often linked to the constituency level, community-based organizations (CBOs) responsible for village development (Village Development Committees), water (Water Point Committee), forest resources (Community Forestry Committees) and wildlife (Conservancy Committees) are established vis-à-vis specific natural resources planning through different pieces of legislation. Customary governance structures, i.e. Traditional Authorities, form the overarching leadership, linked more or less to modern regional government institutions. Overall there is evidence that areas where resources use rights have been given to communities e.g. through the establishment of conservancies, the management of resources by conservancy committees has improved through incentive setting and increased capacities and powers of communities (Davis, 2005). In many cases the Traditional Authorities are the key decision makers concerning resource access and use¹⁸.

191. Chapter 3 elaborates on the institutional landscape and the power/roles descriptions of each of these. It is apparent that there are overlaps in mandates, or at least that, in the context of integrated planning and management of resources, close collaboration, coordination and harmonization would be needed to avoid duplication and even conflicting decision making. Land use planning, for example, is a process relating to all the resources under the control of different committees – there is an opportunity to use LUP as a tool for integration and collaboration of the various CBOs. This opportunity is, however, linked to potential conflicts, which have to be considered in the design of LUP and SLM capacity building interventions.

The local level – freehold property context

192. The situation at a local level in freehold areas is entirely different, as (i) the decision making powers are vested with the land owner, and (ii) the policy framework is consequently different from the one described for communal areas above. Tenure/property arrangements confer much tangible rights over natural resources (incl. land use planning options) to the land owner than is the case under communal tenure. Thus most of the institutional aspects described above, designed for devolution of resource use rights and responsibilities to the local level are superfluous in this context. However, it is important to create incentives for resource conservation (maintenance of soil fertility, reduction of bush encroachment, maintenance of wildlife populations). For example, it is important to provide secure land rights to increase incentives for sustainable land management and conservation of resources. Where tenure rights seem to be insecure, as sometimes interpreted in the wake of current land reform efforts of the Namibian Government, disincentives for SLM are set. It is important

¹⁸ At the onset of the last mopane worm collecting season (March to April 2006), King Taipopi, traditional leader of the Uukwaluudhi in the Omusati region, together with relevant authorities, established a permit system that would only allow registered harvesters to collect worms. Harvesting rates have been put into place to reduce the risk of over-utilizing the resource, especially the harvesting of immature specimens.

to undercut such notions and enact policies that would undermine unscrupulous operations¹⁹. The Environmental Management and Assessment Bill, requiring environmental assessments for larger scale developments and land uses, could potentially provide an opportunity for a policy instrument that would promote SLM in this context. The concept of enforced limitation on the rights of freeholders should also be considered. Incentive and related measures are discussed in some more detail below.

193. Although the in Chapter 6 further developed instruments for improved land use planning, i.e. LUP Toolkits, are specifically targeted in support of communal farmers, it is not implied that such tools are only needed by these stakeholders. It is clear that “commercial” farmers equally are in need of decision-making support information. However, it is believe that access to information and tools is usually more restricted for communal farmers and thus special support should be rendered to this target group. The outcomes from the national assessment are designed in a way that they provide decision-making relevant information for a diverse set of eco- and land use systems throughout Namibia, applicable to all farmers and resource users and managers.

4.2.1 Intra-community relations

194. In the context of community relationships it is important to gain understanding of differences in stakeholder interests and the ways in which different groups are able to compete for the power to control resources. Especially when designing LUP and broader SLM capacity support interventions (Chapter 6) is important to understand the existing power and stakeholder context on-site, and to strategize the best means of ensuring that activities positively and effectively promote sustainable and equitable community involvement. Especially when there are strong vested interests in the land or when the natural resource base has commercial value, considerations of power relations become very important. The separation of intra-community interests is extremely complex and difficult, and often region/site/community specific. It is also noted that intra-community power relations are in a continuous flux situation. Households and individuals who are influential today may be affected by death of the household head and power relations may change from a day to another. The impact of HIV/Aids on household composition and overall power relations can be significant, and should be evaluated.

Institutions

To fully understand intra-community stakes, it is necessary to link the analysis of institutional framework that governs the relationship between people and resources at community level. Many of the institutional arrangements are not transparent or immediately understood by an outsider, yet they are vital for community cohesion, social responsibility and ultimately for achieving SLM.

195. Box 8 provides a case study of intra-community relations in two established conservancies in Kunene region, and provides some important lessons learnt. In all these institutional arrangements at the community level power is the key. Those with power tend to be the more visible, and represent the community to outsiders. The weaker or marginalized are often not seen or heard, yet it is they who, more than anyone else, may depend on the natural resources for their livelihood security. Without a proper understanding of the social dynamics, such people could be further disenfranchised to the benefit of the more powerful, both within and outside the community. Understanding the power and decision making dynamics at community level is crucial to understanding institutional complexity. It should be

¹⁹ This is similarly true for commercial operators/private business/government business that is taking place in communal areas. Whereas the notion of commercial investment in communal areas is generally supported, it is important that developments and envisaged land uses are sustainable and appropriate in the designated area. The assessment (Chapter 2) and part of the LUP capacity building (Chapter 6) aim to provide tools to promote best land use and land management options.

noted that such institutional mechanisms might be established at the individual or family/household level, or at the community level, or a combination thereof.

Box 8: The influence and impact of CBNRM ventures on local power relations

How does CBNRM in Namibia change the distribution of power and influence? (Schiffer, 2004)

Two field studies (in ≠ Khoadi //Hôas and Ehrovipuka Conservancies in Kunene region) revealed that while some power has shifted to the local level, the local communities in general have not necessarily been empowered, in certain areas. The analysis of the relationship between different actors identified certain distinctive problems, including:

- A gap between conservancy staff/committee and the rest of the local population.
- The unclear and potentially explosive role of the respective traditional authorities: they acted either as a motor or a stumbling block for the conservancies.
- A difficult relationship between non-governmental organizations (NGOs) and the Ministry of Environment and Tourism (MET), both following complementary development and conservation goals, but competing for influence and resources.
- Extremely high expectations from all sides, which overburden projects and lead to frustration when not met.

It is a priority of the CBNRM programme to address these short comes and power conflicts.

Gender considerations

196. On-site gender and equity circumstances are important to understand, as there are significant differences in the type of resources used, and one resource might be utilized in very different ways. For example women may want to use one resource for its value as fuel for home cooking purposes, whilst men might want to sell the same resource for a cash income (conflicts around subsistence versus cash needs). Negotiation and decision making processes are important but in this context, and land and natural resources planning could potentially provide tools to facilitate such processes. It is important to consider the different uses in planning, i.e. through empowering women and men in the planning process. It has to be recognized that women are often excluded from decision making regarding land and natural resources. Recently conducted Participatory Poverty Assessments (PPA) in southern Namibia (NPC, 2006 forthcoming), for example, indicate that the only livestock women control are chicken kept at home, thus broader decisions relating to land and resource use and management are mainly made by men as perceived key decision makers. This is despite women having potentially greater dependency on natural resources for subsistence and livelihood security, than men whose interests are often cash based.

Pastoralist

197. A special case relating to land tenure and land and resource use planning and management is that of pastoralists. For example the Ovahimba people of north-western Namibia have specific resource needs. As they are migratory herders planning has to take place at much larger scale and land use conflicts e.g. with people, tourism or even industry establishing in their traditional areas can severely impact on their livelihoods. Ovahimba are living in relatively marginal areas (i.e. high level of aridity, isolation) and they are vulnerable to poverty in modern terms. Exceptional land and resource planning processes have to be

applied in the context of pastoralists, building on traditional knowledge systems, and linking them with modern systems, where and as appropriate.

The poor

198. Overall the poor might be particularly dependent on the land and natural resource base compared to better off people who may have additional cash incomes. However, the poor may not have decision making or negotiating powers to maintain, claim and ensure user rights. When planning capacity building interventions for SLM, including on LUP, a specific pro-poor emphasis should be made, i.e. through the selection of trainees and also addressing social equity and responsibility in the training framework.

Commercialization of natural resources

The change from subsistence use to commercialization is an important driver in natural resource use, and one that often results in over exploitation, if not adequately planned for (see

199. Box 9 for an example on Hoodia). Commercialization of subsistence resources often alters the direct beneficiaries and shifts power constellations. Men, in particular more powerful men, tend to take over such commercial activities, and women and elderly people strongly depending on natural resources for subsistence use, might be marginalized.

Box 9: Commercialization of the Hoodia plant After Zeidler & Montgomery, 2006

The use and partial commercialisation of some traditional herbal medicines can be described by example of the plant *Hoodia gordonii*. For many years certain cultures have utilised the Hoodia for its medicinal properties. Industry has discovered the high potential for commercialisation of the plant. Several steps have to be taken to ensure that:

- (i) the people who hold the traditional knowledge of the plant will be adequately protected and remain the owners of the indigenous property rights, and consequently benefit from the commercialisation of the product,
- (ii) naturally occurring populations of the Hoodia will be protected from exploitation and unsustainable harvesting,
- (iii) products will be developed that are marketable, and can preferably be refined/produced at community-level to ensure that local people can earn a living from the commercialisation of biodiversity products,
- (iv) methods be developed that allow the large scale propagation of the plant, and its sustainable harvesting.

An association for the sustainable harvesting and management of Hoodia has been established in Namibia. Harvesters register with the association and promote the sustainable use of the resource. Illegal collecting of this biological resources is prohibited by law, and cases of illegal harvesting are being prosecuted.

200. Enabling a wider array of stakeholder groups to benefit from commercialization is an important goal. Institutions (see above) can potentially facilitate such equitable use of resources, and participatory land and resource use planning processes can be useful tools. Power relations might become even more intricate when commercial exploitation is carried out by external groups or business, and benefits do not flow back into the community in a equitable manner. A balance needs to be struck between unsustainable external exploitation, and sustainable commercial exploitation that assists communities in securing their livelihoods.

Trade-offs

201. An important realisation is that it is not always possible to generate win-win situations for all stakeholders in land use related decision making. Often trade-offs between user groups and interests including e.g. environmental sustainability need to be weight up. It is important to recognise such trade-offs and to assess different options and scenarios in decision making. This is important in the context of power relationships and for setting incentives, and trade-offs should be explored in detail in the land use planning process.

4.2.2 Regional level stakeholders

202. Beside the power relations between the regional decision making levels and the local level, there are equally important power relations to consider within the regional stakeholder setting. One of the more obvious distinctions is between the regional government and decentralized/ "regionalized" central government. Whereas regional councils are tasked with the formulation of regional development plans, based on participatory poverty assessments amongst other, it is primarily the decentralized function of the Ministries of Lands and Resettlement (MLR) and Agriculture, Water and Forestry (MAWF) to develop sectoral land use plans. The Ministry of Environment and Tourism does so for tourism plans and especially conservation areas in and outside of proclaimed protected areas. Communal Land Boards, composed of representatives of all these organizations and, recently suggested 20, complemented by representatives from relevant local level institutions, have factually the strongest decision-making power when it comes to land tenure issues. As such issues are fundamental to land management and land use planning their decisions will be of great influence in view of ISLM.

203. Currently it is not quite clear how efficiently the implementation of the Governments Decentralisation Act of 1992 and subsequent amendments will move ahead. Power relations at the regional level are thus strongly shaped by the insecurity of mandates, current and future.

204. Municipalities and town councils in the regions have potentially high level of influence in terms of urban and infrastructure planning. Considering that urban and peri-urban centers exert strong pull effects for rural people, their power and capacities should be considered in the context of land use planning.

4.3 INCENTIVES FOR ISLM

205. This section will elucidate the extent to which prevailing incentives and opportunities for engaging in integrated sustainable land management practices, or supporting them. However, based on the above stakeholder and power analysis, the focus is on pointing to incentives for engaging different stakeholders in capacity building for improved land use planning and the application of ILUP toolkits (Chapter 6 for detail). As indicated above, trade-offs will have to be explored in some more detail when considering land use options and negotiating different land user interests. Disincentives also form a powerful context of action or non-action should be considered in future analysis.

206. Key questions to be addressed while designing the toolkits/preparing capacity plans and designing the stakeholder consultations include:

- » Why would someone who knows she/he does not have any decision making power invest in capacity development?
- » Why would those in position of power support training/capacity development of others especially if that could threaten their own realm of influence?

²⁰ The Communal Land Reform Act of 2002 will be amended in this respect, amongst other. A review of and negotiations about the amendment of the Act are currently underway.

- »» How to “sell” SLM and LUP elements to all these stakeholders²¹?

A few proposals are include below, focusing on government and local level resource users. It is noted that these examples have been derived in a non-systematic fashion and more in-depth analysis should be undertaken in future.

4.3.1 Incentives for government:

Current:

- »» Government can take leading role in many programmes that are currently outside its direct influence (donor/NGO driven) and thus strengthen its image. The CPP for ISLM programme is one opportunity to strengthen Governments commitment to extension and rural development work.
- »» Successful case studies and pilot approaches have been demonstrated in Namibia, empowering local level stakeholders i.e. through strengthening CBO’s and involving them in a meaningful manner in land and resource use decision making. It is clear though that such efforts require the development of an enabling policy framework and intense investments on the local level. In the land use planning context this means that local level resource managers should be empowered to take on their rights and responsibilities; formalize arrangements between regional and local level stakeholders should be formed.
- »» The true devolution of resource management rights and responsibilities would be in line with policies and laws enacted in Namibia over the past decade. Thus there should be an interest in Government to continue to engage in capacity building efforts at the local and regional levels. Government would additionally have an opportunity to develop its service profile and support role in such a capacity support context.
- »» Declining human and financial resources to manage land should provide incentives for the devolution of decision making and management powers to the local users. Allowing civil society to exert resource management rights and responsibilities will ultimately lead to less dependency on the state and create a more sustainable society.

Potential:

- »» PESILUP interventions have been designed in collaboration with technical staff of various line ministries. The services and outputs to be provided through the project can be internalized by government. Incentives to do so should be an improved service delivery and more effective implementation of the various policy mandates by central government. Capacity building opportunities should provide further incentives. However, it is clear that high level decision makers have to provide an enabling environment for such an internalisation to take place.
- »» It is recognised that currently issues such as land reform take the forefront of priorities e.g. in MLR, however the long-term benefits of investing into bottom-up LUP and devolution of management rights and responsibilities ought to be highlighted. The documentation and presentation of best practices can potentially contribute to a shift in thinking. It is not only that people are demanding land – they need to be empowered to make a livelihood from their land- both on newly allocated land as well as on traditional farm land i.e. in the communal areas of Namibia.

²¹ An example of where interests by influential farmers has delayed the implementation of community empowering natural resource management legislation is in the case of illegal fencing in communal areas. Only recently steps have been taken prosecuting trespassers more rigorously.

4.3.2 Incentives for local resource users:

Communal Area Context

Current:

- » Tenure and resource use and management rights and responsibilities should be extended to local resource users. Ownership is a strong incentive for responsible and innovative management, both essential to SLM. This is true also in the land use planning context – if people have real decision making powers they will want to be empowered to do so. Capacity building opportunities are sought for especially if a direct application and improved benefits derive from it.
- » The promotion of (new and traditional) community organizations can lead to a more equitable representation of individual and community needs and voices. There is an incentive to currently marginalized individuals and groups to become an active member of CBOs and to exert democratic rights and responsibilities. “It is clear that an essential activity is strengthening and democratizing local institutions, so they can manage their responsibilities for natural resources, and can place sufficient pressure on the authorities to be granted responsibilities in the first place.”

Potential:

- » It is important to emphasize the link between livelihood security and natural resources; making natural resources matter to people will enhance management, protection and create interest in planning (LUP). The role of non-agricultural natural resources in times of drought or other difficulties as emergency resources is especially important to the most vulnerable population groups lacking cash incomes or access to emergency services.
- » Diversification of livelihood strategies and incomes provide important safety nets for rural people. It is clear that agricultural and national planning policies are not always cognizant of this, and rural economies are still strongly based on the premise of cultivation and livestock, however alternative livelihood opportunities and LU options should be thought for.

Freehold context

Potential (foreseen in current policy/legal context, however not enacted):

- » Incentive measures for promoting game farming and tourism as alternative land uses (i) on marginal land, (ii) where resources are scarce/depleted (e.g. ground water), or (iii) traditional uses generate relatively poorer economic benefits (e.g. cattle farming versus mixed wildlife/livestock systems; high value dryland crops such as almonds, olives) should be developed. PESILUP would provide more analytical data as to which land use options are environmentally more sustainable than others. Sustainability is in the interest of the current land user, both on communal and freehold land, as well as the Namibian Government.
- » Tenure insecurity may lead to reduced investments into the farm land and infrastructure and thus reduce the value.

4.4 ADDRESSING POWER RELATIONS, TRADE-OFF REACTIONS AND INCENTIVES RELATED TO SLM

207. It is noted that it will be important to consider trade-off reactions and incentives in the design and throughout the implementation of interventions. Through imparting LUP knowledge and skills amongst the local level land users, existing power relationships might be challenged. This is true on several levels of interventions, amongst local level stakeholders

(e.g. men and women in a household; between traditional authorities and individuals), between the regional and local level (e.g. local level users will demand stronger rights when it comes to negotiating land uses planning in parallel in an area; especially if decisions are superimposed “from above”), and at the national level (e.g. central government may feel disempowered as the devolution of resource/land management rights and responsibilities is moving ahead).

208. This initial treatment of the subject raises some important issues, which should be explored more systematically during the CPP for ISLM and design and implementation of specific interventions. There is a strong literature on formal stakeholder, institutional and power analysis, and such analysis forms a good foundation for identifying incentives and disincentives, developing opportunities and barrier removal strategies, and dealing with trade-offs (Anderson et al., 1998, Bond, 2001; Barrow et al., 2002; Mayers & Bass, 1999; Warner, 2001; Maginnis et al., 2004; Fisher et al., 2005). Whilst learning from the international experiences a decade of community-based natural resources management projects in Namibia, lessons learnt and instruments relating to land tenure and land reform and experiences and results from the recently undertaken Participatory Poverty Assessments (forthcoming in 2006) potentially provide a useful foundation for a systematic in-depth analysis of the subject matter in the context of the CPP for ISLM.

Chapter 5

5 Approach to developing criteria for environmentally sustainable land management in Namibia

5.1 INTRODUCTION: A FRAMEWORK FOR SETTING NAMIBIAN SLM STANDARDS

209. Standards for sustainable land management currently do not exist in Namibia. This means that there are no accepted national definitions on the meaning of sustainable land management or procedural approach in equitably assessing SLM in the country. To fill this gap, it is important to develop the framework for establishing national standards for sustainable land management. Agreeing to such standards could potentially guide land reform and land use planning decisions and would additionally provide a strong foundation for strategic environmental assessments, land use options and scenario planning and environmental impacts assessments. This Chapter introduces the concept of developing such a framework and presents first ideas of how such an approach could be operationalised through the CPP for ISLM in Namibia. The national assessment proposed in Chapter 2 will provide critical scientific data defining environmental sustainability in the Namibian context for different eco-regions and land uses (see also section 5.3.2), and ongoing and planned local level monitoring efforts (Chapter 6) will provide ongoing and up-to-date data for decision-making. It is important that the envisaged standards and criteria are being developed in a participatory manner and endorsement for (i) the approach and (ii) the content ought to be facilitated from the onset of the process. "Process" is once more the key to bringing the proposed actions forward, extending over a medium to longer-term time frame as set by the CPP; institutional considerations, such as who in Namibia would be responsible for bringing forward this work in the future, would also be addressed through the CPP umbrella.

210. The following sections provide an initial introduction to the topic, however do not give a detailed proposal of how to proceed. At this stage no definite proposals of how to develop such a proposed framework further are made. It is suggested that more detailed work should commence during the early inception phase of the CPP of ISLM, when relevant SLM stakeholders will become more directly involved in the programme initiatives. It is important to clearly demonstrate the purpose of developing SLM criteria and standards for Namibia and to engage in stakeholder consultations. Amongst the key constraints and barriers are that currently there seems to be a lack of operational institutions and procedures to implement such a framework and specific recommendation for a capacity support process are needed. Further there is a lack of systematic information and land management practices and their successes and constraints, and farm assessments and resettlement are currently undertaken in a vacuum of clear guidance and standards and criteria.

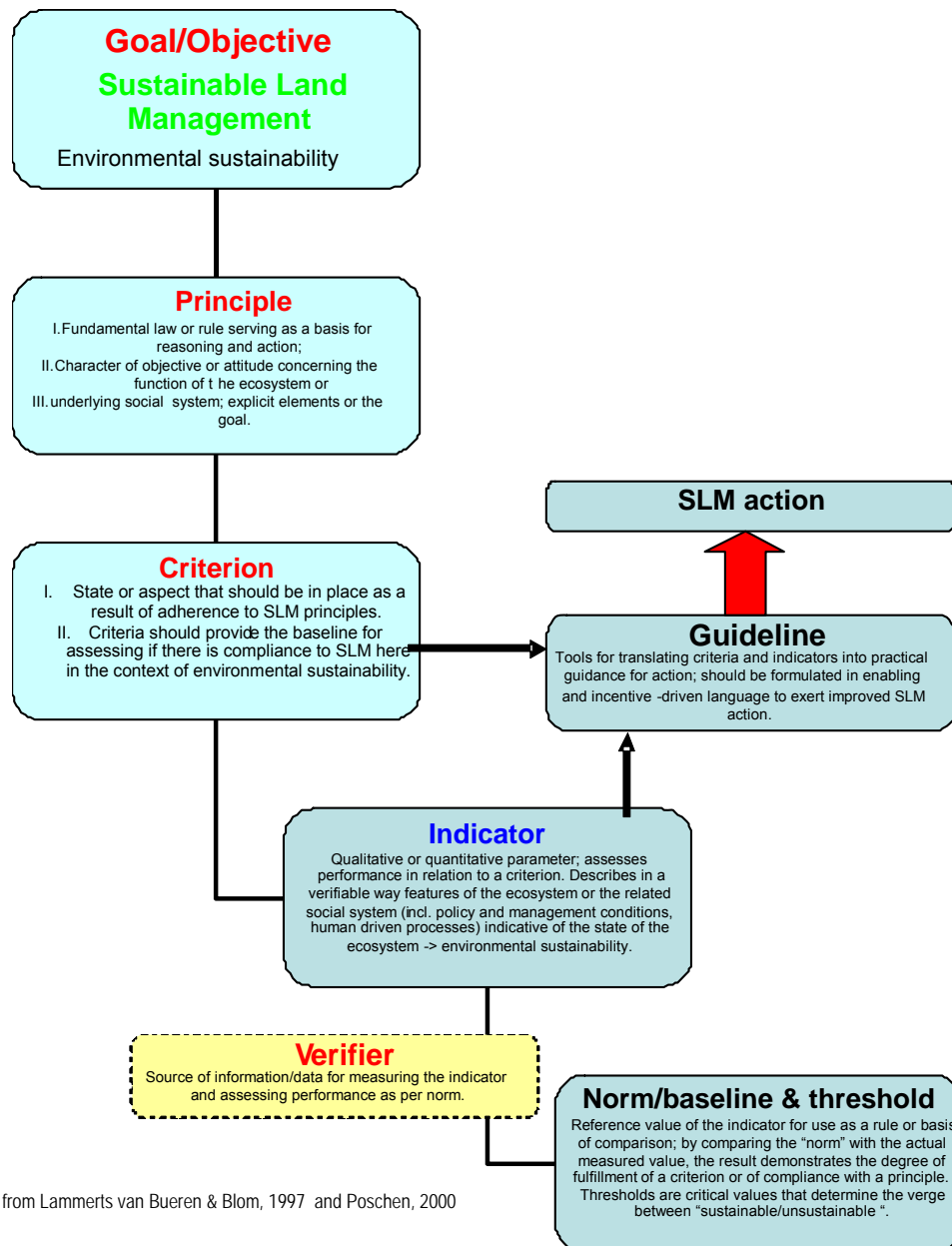
211. Typically standards are set based on an overall goal or objective, in this case achieving sustainable land management through environmental sustainability. It is recognised that, as outlined in Chapter 1, sustainability should optimally address all pillars of sustainability, including social and economic, however the environmental focus shall be retained here. The hierarchical organisation for the formalisation and operationalisation of standards is visualised in

212. Figure 9. A standard consists of a set of principles, which are the components of the overall goal and/or objective. Criteria are usually formulated to describe a desired state or dynamics of the environmental, social and/or economic systems and are tools for assessing success/failure in meeting the set objective. They should be formulated in the form of outcomes and indicators. These then become tools for measuring progress towards achieving the proposed outcome and underpin the structure. Criteria and indicators together form the mechanism that would enable an assessment of whether or not the goal/objective is being met (Poschen, 2000; Segnestam, 2002; Henninger & Hammod, 2002).

Box 10: Organisation of Chapter 5

The Chapter is organised in the following sequence:

1. Introduction to the framework for Namibian SLM standards (5.1)
2. Ecosystem approach Framework (5.2)
3. Opportunities for innovating SLM standards in Namibia (5.3)
4. Proposal for Operationalising SLM in Namibia (5.4)



Adapted from Lammerts van Bueren & Blom, 1997 and Poschen, 2000

Figure 9: A hierarchical framework for the development of SLM standards underpinned by associated principles, criteria, indicators and norms/baselines or thresholds

Box 11: Guidance on the formulation of criteria

- They should be formulated in terms of outcomes as they are the clearest expression that policies or management are having the desired impact
- Not always possible as outcomes may be too complex, in these cases describe criteria in terms of inputs or processes which need to have a clear cause-effect relationship with the objective

Some guidance on the formulation of indicators:

- Allow to objectively verify whether a state called for by a criterion is actually being met
- Need to be unambiguous and measurable
- Ideally integrate a usually complex desired status into easily observable fact

213. Based on the identified SLM criteria and indicators, guidelines for achieving the ultimate goal of SLM can be developed. Such guidelines ought to lead to improved actions in support of SLM. Accepted and scientifically confirmed norms, baseline or threshold values for “sustainability” need to be established to allow for accurate verification of reference values measured through the indicators.

214. The development of SLM standards and support components has to take place on various levels. In the context of this report (i) national and (ii) local/regional level are distinguished while (iii) policy and legislative levels are differentiated from the (iv) implementation and instruments levels as well. On all levels strong participation will be required.

5.2 THE ECOSYSTEM APPROACH - AN EXISTING FRAMEWORK TOWARDS ACHIEVING ENVIRONMENTAL SUSTAINABILITY

215. Internationally, a number of sectoral standards for ecosystem management have been developed, and it is important to try and operationalise such instruments. These include for example standards for sustainable forest management, approaches to “ecosystem based management”, “integrated river-basin management”, “integrated marine and coastal area management”, and “responsible fisheries approaches”, amongst others. For example, the “ecosystem approach” of the UN Convention on Biological Diversity (CBD) is a framework for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (Table 12). It is asserted that the application of the ecosystem approach will help to reach a balance amongst the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources. In addition the ecosystem approach has been recognized by the World Summit on Sustainable Development as an important instrument for enhancing sustainable development and poverty alleviation. Thus the ecosystem approach is largely in line with the “environmental sustainability” definition expanded on in Chapter 1 of this report and may in an adapted form provide a useful venture point for the development of Namibian SLM standards. This is particularly so as the national assessment (Chapter 2) proposes an “ecosystem services” focus, which can potentially be aligned with SLM.

Table 12: CBD EA principles and their rationale: the application and interpretation of the EA in a SLM context in Namibia should be considered (CBD, 2003)

Principle	Description and Elaboration
Principle 1:	The objectives of management of land, water and living resources are a matter of societal choice
	Different sectors of society view ecosystems in terms of their own economic, cultural and societal needs. Indigenous peoples and other local communities living on the land are important stakeholders and their rights and interests should be recognized. Both cultural and biological diversity are central components of the ecosystem approach, and management should take this into account. Societal choices should be expressed as clearly as possible. Ecosystems should be managed for their intrinsic values and for the tangible or intangible benefits for humans, in a fair and equitable way.
Principle 2:	Management should be decentralized to the lowest appropriate level.
	Decentralized systems may lead to greater efficiency, effectiveness and equity. Management should involve all stakeholders and balance local interests with the wider public interest. The closer management is to the ecosystem, the greater the responsibility, ownership, accountability, participation, and use of local knowledge.
Principle 3:	Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and

Principle	Description and Elaboration
	other ecosystems.
	Management interventions in ecosystems often have unknown or unpredictable effects on other ecosystems; therefore, possible impacts need careful consideration and analysis. This may require new arrangements or ways of organization for institutions involved in decision-making to make, if necessary, appropriate compromises.
Principle 4:	Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem-management programme should: (a) Reduce those market distortions that adversely affect biological diversity; (b) Align incentives to promote biodiversity conservation and sustainable use; (c) Internalize costs and benefits in the given ecosystem to the extent feasible.
	The greatest threat to biological diversity lies in its replacement by alternative systems of land use. This often arises through market distortions, which undervalue natural systems and populations and provide perverse incentives and subsidies to favour the conversion of land to less diverse systems. Often those who benefit from conservation do not pay the costs associated with conservation and, similarly, those who generate environmental costs (e.g. pollution) escape responsibility. Alignment of incentives allows those who control the resource to benefit and ensures that those who generate environmental costs will pay
Principle 5:	Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.
	Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their abiotic environment, as well as the physical and chemical interactions within the environment. The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the long-term maintenance of biological diversity than simply protection of species
Principle 6:	Ecosystems must be managed within the limits of their functioning.
	In considering the likelihood or ease of attaining the management objectives, attention should be given to the environmental conditions that limit natural productivity, ecosystem structure, functioning and diversity. The limits to ecosystem functioning may be affected to different degrees by temporary, unpredictable or artificially maintained conditions and, accordingly, management should be appropriately cautious.
Principle 7:	The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.
	The approach should be bounded by spatial and temporal scales that are appropriate to the objectives. Boundaries for management will be defined operationally by users, managers, scientists and indigenous and local peoples. Connectivity between areas should be promoted where necessary. The ecosystem approach is based upon the hierarchical nature of biological diversity characterized by the interaction and integration of genes, species and ecosystems.
Principle 8:	Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.
	Ecosystem processes are characterized by varying temporal scales and lag-effects. This inherently conflicts with the tendency of humans to favour short-term gains and immediate benefits over future ones
Principle 9	Management must recognize that change is inevitable.
	Ecosystems change, including species composition and population abundance. Hence, management should adapt to the changes. Apart from their inherent dynamics of change, ecosystems are beset by a complex of uncertainties and potential "surprises" in the human, biological and environmental realms. Traditional disturbance regimes may be important for ecosystem structure and functioning, and may need to be maintained or restored. The ecosystem approach must utilize adaptive management in order to anticipate and cater for such changes and events and should be cautious in making any decision that may foreclose options, but, at the same time, consider mitigating actions to cope with long-term changes such as climate change.
Principle 10:	The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.
	Biological diversity is critical both for its intrinsic value and because of the key role it plays in providing the ecosystem and other services upon which we all ultimately depend. There has been a tendency in the past to manage components of biological diversity either as protected or non-protected. There is a need for a shift to more flexible situations, where conservation and use are seen in context and the full range of measures is applied in a continuum from strictly protected to human-made ecosystems.
Principle 11:	The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.
	Information from all sources is critical to arriving at effective ecosystem management strategies. A much better knowledge of ecosystem functions and the impact of human use is desirable. All relevant information from any concerned area should be shared with all stakeholders and actors, taking into account, inter alia, any decision to be taken under Article 8(j) of the Convention on Biological Diversity. Assumptions behind proposed management decisions should be made explicit and checked against available knowledge and views of stakeholders.
Principle 12:	The ecosystem approach should involve all relevant sectors of society and scientific disciplines.
	Most problems of biological-diversity management are complex, with many interactions, side-effects and implications, and therefore should involve the necessary expertise and stakeholders at the local, national, regional and international level, as appropriate.

216. It is noticeable from the preceding paragraphs that “environmental sustainability” principles to a large extent address governance and institutional aspects. In terms of governance and institutional issues, the devolution of environmental resources, rights and management is at the heart of achieving environmental sustainability. This report is concerned with setting the foundation for establishing a process for formulating widely agreed to Namibian SLM principles, developing criteria and, potentially, defining precise indicators that can be operationalised. It is recognized that this work will take place at different levels and for different purposes, and that final concrete recommendations will probably have to be disaggregated according to these.

5.3 OPPORTUNITIES FOR INNOVATION: NAMIBIAN SLM STANDARDS, CRITERIA AND INDICATORS

5.3.1 Participation and key stakeholder buy-in

217. It is clear that the setting of agreed to standards and development of underlying criteria will require strong commitment and buy-in from decision makers at all levels. For the land sector in particular the need for more unified and unequivocal land assessments has been voiced over and over again. Whereas the valuation of land, as currently undertaken, does form the foundation for the land taxing system, it is clear that some of the currently used criteria for valuation and assessment are not fully harmonized. In the context of environmental sustainability few criteria are currently being applied.

218. It is recommended that an intensive stakeholder participation plan be developed during the early inception phase the CPP for ISLM, and hand-in-hand with its policy and participation plan. The through the CPP formed stakeholder participation and governance platform should be utilised maximally.

5.3.2 Policy and legislation

219. It is recognised that the spectrum of pronounced government policies, specifically those on natural resources and land management, set the stage and determine the limitations as well as opportunities for the use of land in a sustainable and integrated manner. A review of currently existing policy instruments (Chapter 3) has clearly identified gaps in and opportunities for systematically addressing environmental sustainability as a key element in Namibia’s policy and regulative framework. Based on this review strategic entry points to (i) developing and (ii) mainstreaming environmental sustainability criteria into future policy developments and implementation are flagged for the CPP for ISLM to address these over the coming years.

Strategy proposals to effect change

220. Although it is generally difficult to change established policies and laws, there are opportunities to effect improvement and change. Legislative frameworks should be adaptive and evolve according to identified needs, however, it is a reality that amendments to promulgated Acts of Government are hard to initiate and effect. Consequently, the Government of the Republic of Namibia has to identify strategies for harvesting and communicating new knowledge and understanding.

221. It is proposed that initially the concept of developing SLM standards in Namibia be more widely introduced and discussed. The benefits and value of agreeing to a scientifically sound standard, with the underlying principles, criteria and norms should be clearly communicated. Harmonization of policy and law would at least be one such an incentive.

222. Apart from aiming for informing, revising and amending existing policies and laws, critical contributions can be made to the formulation of new and improved instruments. Such policy processes may be lengthy and extend beyond the project cycle of a single intervention

such as PESILUP, but in association with the much longer-term CPP for ISLM country programme it is envisaged that significant and pronounced contributions can be made.

223. Further, on a national and regional level, environmental sustainability criteria ought to be integrated into newly emerging and more frequently updated development strategies and plans. When considering the formulation of national and/or regional level development plans it is especially critical to integrate environmental sustainability criteria especially into:

- »» National Development Plans
- »» Regional Development Plans
- »» Regional land use plans
- »» Communal area development plans
- »» Large scale industrial, mining, infrastructure and irrigation developments
- »» Farm assessments and land reform related processes (land valuation, land allocation plans, resettlement plans)

Collection of additional consideration

224. A few additional points to consider concern:

- »» Strategic Environmental Assessments and Environmental Impacts Assessments in Namibia, currently carried out with limited experience and skills and legal framework could be greatly improved if a national SLM standard would exist
- »» Decision-making in terms of selecting best land use options would be greatly enhanced
- »» Even on a local decision making level standards should apply

5.3.3 Scientific support data

225. The scientific support data for establishing the standard are primarily being generated from the national assessment and SLM monitoring scheme outlines in Chapter 2, and in the long-run through local level monitoring activities ongoing or planned under the CPP (see Chapter 6).

National level SLM criteria and indicators – environmental sustainability of land uses, management practices and tenure arrangements

226. The national assessment of land use, management and tenure impacts on environmental sustainability to be identified through a SLM monitoring scheme (Chapter 2) will provide the necessary scientific information for formulating relevant and applicable environmental sustainability criteria for land uses in different eco-regions of Namibia. Associated potential indicators are already designated in the methodology (Chapter 2), and will be further operationalised through the research component of the proposed assessment as part of the CPP project. It is important that the national assessment is designed to provide policy level information that is related to setting national standards of SLM. An initial strategy of how to develop and agree to the criteria in a participatory manner is proposed. Further, proposals on how to communicate the final recommendations on criteria and indicators through the CPP for ISLM are outlined at the end of this Chapter.

227. Initial proposals for how such criteria and indicators could potentially look like in Namibia are included in Appendix D.

Local/regional level SLM criteria and indicators

228. The national assessment will also provide relevant scientific information on environmental SLM criteria and indicators at the local and regional levels. However, some more in-depth research is recommended to complement the national approach with ongoing local level SLM research, monitoring and management elements, which cannot be readily

integrated into the national assessment. Considerations of local level traditional and indigenous knowledge systems shall particularly be considered. Existing and planned local level monitoring (LLM) systems and other relevant information available (see reviews in Chapters 2 and 6) will be utilised as relevant.

Land management options

229. Guidance on the most viable, appropriate and suitable land uses, management practices and tenure arrangements that are environmentally more or less friendly in various Namibian eco-regions/ecological zones should be derived from the national assessment. Key land uses to be considered and potential impacts (positive/negative) should be provide in clear formats. The analysis would need to provide a level of detail that is useful to land use planning and land management purpose.

Table 13: Major land use categories of relevance in Namibia, and sub-categories. It would be necessary to identify current and potential land management practices in the proposed analysis

Major land use categories	Sub-categories
Rangelands	Large stock production
	Small stock production
	Game production
	Mixed systems
Forestry & fisheries (for timber & fuel, natural products)	Forestry
	Community-forestry
	Non-timber forestry products
	Inland fisheries
	Aquaculture
Ecotourism	Tourism
	Community-based Tourism
	Protected areas
	Conservancies
Urban ¹ & Peri-urban	
Mining ²	Large mining operations
	Small scale mining operations
Croplands ³ (irrigated and dryland/rainfed)	Dryland cropping
	Irrigation
	Indigenous fruit trees
	Biodiversity products (Maroela, Devisl claw, Hoodia, a.o.)
<small>¹small footprint, but worth a consideration as about 50% of all people might be living in urban areas; measure e.g. hard surface areas: roofs, roads, fragmentation ²small footprint, but worth a consideration because strong economic impact ³mostly integrated into others; may wish to distinguish irrigated and dryland/rainfed croplands</small>	

Example of a potential information matrix for criteria, indicators and verifiers for identified principles

230. An example of a potential information matrix for criteria, indicators and verifiers for identified principles is depicted below. Additionally Appendix G elaborates potential biophysical characteristics that could be considered.

Table 14: An example of a potential information matrix for an identified land use type

Principle 5:		Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.			
Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their abiotic environment, as well as the physical and chemical interactions within the environment. The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the long-term maintenance of biological diversity than simply protection of species.					
Criterion	Indicator(s)	Verifiers	Data source	Eco-region/site/land use	Level of application
Land tenure systems should promote long-term environmental sustainability	a. Key ecosystem services are being maintained by the observed land tenure on site	- Assessment results (Chapter 2) - Local level monitoring results on site based also on LUP considerations (Chapter 6)	- Assessment generated - CPP generated	All	Locally (On-site); Nationally (as per land tenure system)

5.4 PROPOSALS FOR OPERATIONALISATION

231. It is proposed that the participatory development of a criteria framework through designing and agreeing to a general SLM standard and underpinning principles commence during the early inception phase of the CPP for ISLM, when strong stakeholder involvement will be generated. It is important that a framework for agreed to criteria will be integrated into the final design of the national assessment. The assessment will then test and refine the proposed criteria and recommend a final set based on the research outcomes. The timing of this work is closely interlinked with the assessment.

232. At this stage the methodological approaches to criteria development and standard setting are still peripheral. It is recommended to focus follow-up work on the more detailed elaboration of a concept that would follow-up on this initial work after the concept per se has been agreed to with the key stakeholders. It is understood that the SLM criteria and standard development can only be sparked off at this stage, but that the process will certainly have to be planned over a longer-term time horizon, i.e. the CPP for ISLM provides a suitable platform to facilitate such work.

233. A review for of current institutional arrangements and proposals for reform and revision of responsibilities amongst SLM institutions should be prepared during the early inception phase of the CPP, as a strategic contribution to the country programme.

5.4.1 Proposed Workplan

234. Similar to the content of Chapters 2 and 6, the development of a standard system including environmental criteria for sustainable land management is a proposed element of the CPP and related projects. Consequently recommendations for the operationalisation of this element are included in form of a draft work plan.

Table 15: Draft work plan for operationalisation of developing standard criteria

Outcomes	Activities	Team
1. Re-fine approach to SLM standard setting and agree on principles	<ul style="list-style-type: none"> Review proposed approach to standard setting; undertake more detailed review work especially on existing methodologies and lessons learnt; focus on process and operationalisation Undertake intensive stakeholder consultations and foster engagement Develop convincing and informative briefing materials for high-level decision makers Collaborate with CPP for ISLM policy outcome and action plan 	Consultant Advisory team Ecological analyst Range of national/international experts/practitioners
2. Stakeholder engagement	<ul style="list-style-type: none"> Plan early inception meeting/workshop to generate common vision for standard setting and criteria development Develop stakeholder participation plan Undertake intensive stakeholder consultations and foster engagement throughout the project 	Consultant
3. Collect scientific support data or information for criteria, indicator and norm or baseline/ threshold setting	<ul style="list-style-type: none"> Communicate information needs (e.g. based on draft principles) to assessment team and ensure that the research will provide relevant scientific information Conduct assessment (Chapter 2) 	Consultant CPP for ISLM team Stakeholders
4. Data analysis and interpretation	<ul style="list-style-type: none"> Interpret data in an ecosystem services and land use options context Formulate criteria, indicator and norm/baseline/ threshold setting Circulate draft results and recommendations to amongst relevant stakeholder to foster engagement Carry out public consultations and participatory peer review 	Consultant Ecological analyst Advisory team
5. Policy maker publication and consultations on criteria	<ul style="list-style-type: none"> Prepare publication targeted at Namibian policy and high-level decision makers Plan dissemination and consultation plan 	CPP for ISLM team
6. Recommendations for SLM criteria adopted (local/regional/national levels)	<ul style="list-style-type: none"> Agreed to criteria applied National workshop (see Chapter 6) 	Stakeholders

Chapter 6

6 Land Use Planning (LUP) capacity development for Integrated Sustainable Land Management (ISLM)

6.1 INTRODUCTION

235. As set out in Chapters 1 and 2, land use planning is a means of ensuring sustainable land use and management through a decision-making process that "facilitates the allocation of land to the uses that provide the greatest sustainable benefits" (Agenda 21; UNCED, 1992). It is a process tailored to the socio-economic conditions and expectations of the land users occupying a defined natural land unit through a goal analysis and valuation of land resources.

236. Land use planning (LUP) is a first step in sustainable land management (SLM), laying the foundation for choosing and applying the most suitable land management practices for the intended use of land. Thus LUP optimally is an initial and integral part of a larger SLM context and process (Chapter 1). It is further influenced by land reform and land tenure arrangements. Effective and informed land and natural resource use planning at local and regional levels can foster the choice of most suitable land uses in an area and provide the basis for application of appropriate land management practices, adapted to the local environmental, economic and sociological conditions (Chapter 1).

237. This Chapter aims to (i) provide an overview of the current status of land use planning in Namibia and identify gaps and opportunities for improved LUP, (ii) analyse experiences from Namibia and elsewhere in land use planning, (iii) review from the literature what elements land use planning theoretically should entail, (iv) make recommendations for a land use planning for ISLM capacity building package for Namibia, specifically identifying elements that could be implemented through a CPP related intervention such as PESILUP, proposing a pilot approach for its implementation including a draft budget.

Box 12: Organisation of Chapter 6

The Chapter is organised in the following sequence:

1. Capacity building needs for improved environmental management incl. LUP (6.2)
2. LUP best practices globally and locally (6.3)
3. Capacity building experiences and tools (6.4)
4. Capacity building plan & content of ILUP toolkits – recommendations (6.5)
5. Site selection and hierarchical piloting approach (6.6)
6. Operationalisation of toolkits and capacity building plans (6.7), and budgetary considerations (6.8)

6.2 CAPACITY BUILDING NEEDS FOR IMPROVED ENVIRONMENTAL MANAGEMENT INCLUDING ON LAND USE PLANNING (LUP)

238. For the development of capacity building interventions it is usually useful to undertake a more detailed stakeholder analysis (see Chapter 4) and target group specific capacity needs assessments. A number of such assessments were carried out in Namibia over the past few years and a brief synopsis of some of the most relevant studies is presented in the following subsections. An in-depth stakeholder consultation was additionally undertaken within the scope of work culminating in this report. A land use planning student from the Polytechnic of Namibia who participated in the assignment conducted interviews with regional and local level stakeholders in the Caprivi Region in north-eastern Namibia. The key recommendations from this section are directly addressed in the proposed capacity development plans below.

6.2.1 Capacity building and capacity needs: Definitions & results from NCSA

239. Namibia has engaged in a three year process (2003/4 -2005/6) implementing the first phase of the UNDP/GEF National Capacity Self-Assessment (NCSA) for Environmental Management. The national assessment aside, three local/regional assessments were carried out in pilot areas that represented different eco-regions and associated environmental management issues. The selected regions were namely Erongo, Hardap and Oshikoto. A diversity of stakeholders was consulted and a broadly representative assessment of self-identified capacity needs was produced²².

240. Three types of capacity were distinguished in the assessment:

Individual:

- » changing attitudes and behaviours,
- » imparting knowledge and developing skills
- » maximizing the benefits of participation, knowledge exchange, and ownership

Institutional:

- » institutional performance and functioning capabilities,
- » ability of an organisation to adapt to change

Systemic:

- » policy framework in which individuals and organisations operate and interact with the external environment,
- » formal and informal relationships of institutions

241. The assessment revealed that perceived capacity needs differed amongst the various stakeholders. However, the over indication clearly point towards technical skills, knowledge and qualifications being needed by all throughout the stakeholder groups. Planning of natural resources and land uses were amongst the technical fields identified as priority areas, as part of broader SLM and NRM interventions (DRFN, 2004; Zeidler, 2005).

242. On an institutional level it is especially funding, financial investments and equipment, which are needed most, followed by improved organizational procedures and linkages. The latter, in a LUP context, would include the establishment of stakeholder forums linking local level and regional level decision makers and fostering collaborations (MET, 2005: NCSA Action Plan).

243. The **systemic capacity needs** identified by the interviewees include:

- » People heard about policies, but do not know content
- » Lack of policy implementation and law enforcement
- » Environmental sustainability not systematically mainstreamed (i.e. sectoral and macro-level planning policies)
- » More local/regional level collaborations/networks are needed
- » Decentralisation to be strengthened: need improved capacities for regional and local authorities and extension services

244. The stakeholder power analysis (see Chapter 4) points to the importance of community-based organizations (CBOs) in the context of ILUP capacity building interventions reaching out to the local resource manager level. There is thus a need to consider and investigate CBO capacity needs in greater detail.

²² It should be noted that Namibia has developed a follow-up proposal to the NCSA and a suite of NCSA I recommendations have been formulated into a formal National Action Plan that addresses cross-cutting environmental management issues and interventions. The CPP for ISLM and an intervention such as PESILUP can contribute to the implementation of key capacity building priorities at all levels.

Individual capacity needs

Technical skills:	18%
Organizational & HR Skills:	10%
Knowledge & qualification:	65%
Attitudes:	7%

Institutional capacity needs

Staffing:	0%
Funds:	25%
Org. procedures & linkages:	17%
Equipment:	50%
Service delivery:	8%

Systemic capacity needs

- Policy contents unknown
- Lack of implementation and law enforcement
- Environmental sustainability not considered
- More local/regional level collaborations/networks are needed
- Decentralisation to be strengthened

245. Whereas capacity needs for improved knowledge, qualification and technical skills by individuals will be directly addressed through planned CPP interventions, it is not quite clear in how far the project can address and contribute directly to the institutional capacity needs perceived, primarily identified as financial and capital investments. PESILUP can, however contribute to the establishment of organizational procedures and linkages i.e. thorough promoting multi-stakeholder planning processes and targeted joint stakeholder capacity building interventions. Proposals and recommendation are elaborated below.

6.2.2 Capacity needs – key stakeholder specific in-depth assessments and support actions

246. As indicated in the stakeholder analysis sectorally established institutions concerned with natural resources, environment and SLM including ILUP decision making abound at all levels of governance. Table 16 elucidates the type of current institutional support extended or planned to be rendered by development partners to such structures.

Formal capacity assessments have been carried out for

- Regional Councils in Namibia's Coastal areas (EcoAfrica, 2004 for Nacoma),
- Water Basin Management Committees (DRFN, 2004),
- Communal Land Boards – general (Kakujaha-Matundu et al., 2004), and
- Communal Land Boards – environmental management (Jones & Kakujaha-Matundu, 2006).

Table 16: Key regional and local level organisations with stakes in LUP and allied development partners.

Institutions	Development Partners	Type of capacity support provided
Regional institutions		
Regional Councils	EU RPRP, NACOMA (GEF/WB)	Capacity development; training and skills infrastructure
Communal Land Boards	EU, USAID through NNF, GTZ	Capacity assessments Development of capacity building plan still outstanding Equipment and infrastructure support
Water Basin Management Committees	GTZ, GEF/Unesco & UNDP under CPP – planned; MSP project brief submitted	Mainly process support Training and skills development Some equipment and infrastructure support
Local institutions		
Conservancies	CBNRM-MET, ICEMA (GEF/WB), WWF-LIFE, USAID, French Gov., SGP/GEF, other community funds others	Strong capacity support in pilot areas/established conservancies Training and skills development Equipment and infrastructure Cash investments through various community level funding mechanisms
Community Forests	DED, others	Similar to above, much smaller intervention area focus
Water Point Committees	EAST – DRFN, NDT	Similar to above, much smaller intervention area focus
Community-financing	Danish, Swedish Gov., UNDP/GEF SGP	Cash investments/non-repayable funds
• Government extension/Decentralisation		
MAWF extension	REMP, EU, NASSP, other; CCA – GEF/UNDP; FAO	Capacity support: Training and skills development Equipment and infrastructure
MET Decentralisation (NOTE THAT THIS is not going forward well at all).	GTZ, NCSA – GEF/UNDP WB/GEF NACOMA	Capacity support: Training and skills development Equipment and infrastructure
MLR Decentralisation	GTZ, EU	Capacity support: Training and skills development Equipment and infrastructure
Multi-stakeholder collaborations		
FIRMS	DRFN – EU, CALLC GEF/UNDP under CPP umbrella	Capacity support: Training and skills development Equipment and infrastructure

247. The latter report is particularly relevant to the development of ILUP capacities on the regional and local level and some of its key findings are summarized in the Box 13 below.

248. It should be noted that MLR staff voiced particularly capacity bottlenecks within the Ministries' operations pertaining to the up-scaling of interventions and systematic outreach to local farmers, resettlement farmers and other who would need LUP and SLM capacity support.

Box 13: Key findings on CLB' s capacity for environmental management

GTZ recently commissioned a capacity assessment of Communal Land Boards with view of promoting environmentally sound decision making (Jones & Kakuha-Matundu, 2006).

The assessment largely confirmed previous findings and assumptions are described in the PESILUP concept and the CTF report. Capacity needs recommended include:

- Bring CLBs closer to broader land use planning systems
- Need for clear procedures and guidelines for addressing environmental issues incl. on EIAs on of how to tap knowledge/information
- Establish the in the National Land Policy proposed Land Use and Environmental Boards (LUEBs) facilitating planning across sectors and between national and regional systems, and to promote environmental sustainability
- Harmonize sectoral legislation (MET, MAWF) with National Land Policy (MLR) esp. addressing issues of land tenure
- Include amendments to Communal Land Reform Act as proposed at a 2005 conference pertaining to representation of conservancy committees and community forest committees as CLB members
- Develop capacity of MET and MLR to provide increased and improved technical support to CLBs on environmental issues
- Develop basic training programmes for land board members that cover basic land use planning, basic environmental principles, economic potential of different land uses, EIAs and EMPs, and other relevant sectoral legislation and principles of CBNRM including community forests
- Provide CLBs with appropriate data, documentation and maps that will enable them to make informed decisions (incl. existing development plans etc)

Section 6 of the MET report elaborate in some detail capacity building and sensitization needs of

1. CLB members
2. MET & conservancy members
3. Frameworks and processes
4. Processes and procedures in MET and MLR

All needs include to a greater or lesser extent ILUP aspects, and PESILUP should target to help address these capacity gaps through (i) information generation through the assessment component, (ii) the development of the ILUP toolkits and (iii) the associated capacity building plan.

6.2.3 Participatory ILUP information needs assessment in Caprivi region – local and regional stakeholders

249. A survey was undertaken in support of this report, highlighting local level information needs concerning LUP as identified by farmers and institutions working in rural extension services in the Caprivi Region, north-eastern Namibia (de Azambudja, 2005). From the assessment the following key approaches to the development of local level ILUP capacity plans emerges:

- It would be useful to develop integrated land use planning tools adapted to the eco-regional context of a site, such tools could be in the form of “toolkits”²³; although ILUP processes will remain similar, the underlying data for decision making must vary;
- The final content of a local level tool kits should be based on local level needs assessments;
- Information needs might go beyond the more narrow scope of ILUP related topics, however as ISLM is a key goal, room should be made to address such other needs;
- It should be elucidated if regional extension officers and service providers would be in a position to generate and make available such information and relevant support actions be put into place;
- It is important to design the tool kits and associated training packages targeted for the envisaged user group;
- For the local level training modules should be supported by action research and practical examples, not only by providing a “written set of tool kit material”;

²³ The rationale of a “toolkit” is described under capacity building section

- Once one community of farmers has been training in ILUP and the use and application of the tool kit, these people could serve as peer trainers and replicators; incentive systems need to be developed; a potential approach could be work with the farmers associations
- It would be desirable if the regional extension officers (both from government and non-governmental institutions) would apply the tool kits and use them in their own extension work. They would need to be trained in the application of them.

6.3 LAND USE PLANNING BEST PRACTICES GLOBALLY AND LOCALLY

6.3.1 Context of international land use planning initiatives

250. Land use planning constitute a key chapter in Agenda 21, a global framework for action on sustainable development and the environment adopted by the international community in 1992 during the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil. In response to Agenda 21, international agencies and national governments have developed guidelines for land use planning and tools in support of land use processes. Such as: The UN Food and Agriculture Organisation (FAO), in collaboration with the German Agency for Technical Cooperation (GTZ) and selected CGIAR centres, produced series of relevant resource materials through associated international working groups. Materials such as “Guidelines for land use planning” (FAO, 1993), “Land-use Planning; methods, strategies and tools” (GTZ, 1999), and “Land use portals” e.g. of CIAT-World Bank-UNEP (<http://gisweb.ciat.cgiar.org/sig/inicio.htm> or <http://www.ciat.cgiar.org/indicators/lacproj.htm>) were developed and made widely available.

251. FAO together with GTZ produced a resource CD entitled “Integrated planning for sustainable management of land resources” in 1999, which includes a collection of relevant background documents to the related technical issues. This CD is disseminated especially to developing countries via the various institutions’ country offices. Most of the resources and others are freely available via the Internet at present.

252. Despite the availability of a wide range of excellent guidelines and information on SLM and SLM-IM (Herweg et al., 1999), the local background situation and status of natural resources are seldom considered and applied to planning in a country specific context. More than often, LUP interventions have led to the development of macro-level databases and the elaboration of sophisticated plans on paper without the concrete translation of such resources and materials into real decision making. This is mostly a consequence of such interventions not being fully informed by local conditions, needs and aspirations but rather relying heavily on external ideas and ideals. Top-down planning of land use may create conflicts with local land users, who may have very different land use objectives than regional and national planners. It is essential to overcome such differences by designing land use and resource planning processes cognizant of local aspirations and link them to broader scale regional or national strategies. SLM has a local level connotation and SLM practices should therefore largely be based on local level ILUPs. It is thus the aim of the Namibian ILUP toolkits to integrate international guidelines with nationally and locally available country information to arrive at flexible locally adapted resource materials that can then be applied at various levels by different user categories.

253. A substantive review of rural planning, especially of natural resources, has been undertaken by Dalal-Clayton et al. (2000). They reviewed in-depth current development and land use planning approaches, processes and tools in applied in developing countries, and identified key barriers to effective application and implementation of such plans. Drawing from a series of case studies from various countries, the authors derived key lessons learnt and recommendations for improved planning processes. Key elements of the recommendations revolve around the importance of participation and stakeholder involvement in planning processes. The key outcome of planning should not be a plan in itself, but planning should be understood as a process, which includes implementation and continuous revisions, monitoring and evaluation. The sustainable livelihoods framework (Carney, 1998) is identified as a powerful tool for analysis, especially for the development and discussion of development

visions and land use options, as the framework addresses the five capitals necessary for sustainable livelihoods (see Appendix D.I). The importance of institution building as a prerequisite for successful planning processes is strongly highlighted, and has been an underlying problem of failure of many of the country case studies presented. Ownership by the national institutions over the planning processes is critical. In the context of this work it is important that the Namibian decision-makers concerned with land use planning realise that successful approaches are bound to their sincere commitment to review current approaches and practices and to agree to institutional reforms. What is already set out in the policy context (see Chapter 3) in terms of decentralisation and devolution of natural resource management rights and responsibilities has to be firmly reflected in the institutional structures, mandates and performance at all levels.

254. Various case examples of rural land plans exist from eastern and West Africa. In Mali the “Gestion de terroir” (land management) approach has been practised more widely (e.g. Hesse et al. in Dalal-Clayton et al., 2000). The approach has three main elements focusing on natural resources especial soil and water conservation, institution building and local development. It seeks to promote and integrated and participatory processes to rural land use planning. However, a key criticism is that planning is not fully integrated as a bottom-up process, meaning that local resource users are not truly enabled to negotiate resource use on their own, to establish rules and regulations about resource uses, and to undertake ongoing planning and tracking of resources independently. Additionally it was found that in Mali the enabling environment is not sufficiently developed and policies on devolution of resource management rights and responsibilities and land tenure are lacking. In Namibia, at this stage, it seems that the enabling environment is comparatively favourable (Chapter 3), although bottlenecks (e.g. land tenure insecurity, capacity deficits) exist. Programmes such as the national CBNRM programme and the FIRM approach, both introduced elsewhere, provide a suitable institutional setting which allows to engage natural resource managers to get involved in a suite of support activities that enable them to engage meaningfully in land use planning processes such as laid out in the remainder of the Chapter and in Appendix H, esp. H.IV and H.V).

255. A great deal of relevant work has been undertaken in Tanzania (Kauzeni et al., 1993; Dalal-Clayton et al. in Dalal-Clayton et al. (2000)). For example the HIMA programme, a natural resources management programme undertaken between 1989 and 2002 in southern parts of Tanzania, has tested a suite of participatory approaches to natural resource planning and management. Joint planning between extension personnel from various relevant government institutions, local resource managers and project staff has taken place over years, and villages were trained in developing and updating their own resource plans. Key lessons learnt from the process that it was particularly important to make long-term commitments to the villages, engaging in focused support interactions. Up-scaling of the intense interactions is difficult, a lesson learnt from many other case studies and pilot approaches. In the Namibian context it is useful once again that important “ground work” has been undertaken by national programmes promoting CBNRM, farmers-action- research and participatory planning and interventions. Thus “testing” of the proposed activities can commence on a more content based level than creating awareness and institutions. In fact the proposed land use planning activities and capacity building plans will give already existing institutions more “content” for meaningful action and add value through additional capacity development opportunities.

256. A number of other case examples exist, as well as very useful guidance on how to improve on previous experiences is giving in review literature such as Dalal-Clayton et al. (2000). The elaborated proposals are based on lessons learnt and recommendations provided from the international experience and, additionally, supplemented by experiences gained from more than a decade of rural development activities in Namibia since Independence in 1990. It is recommended that the review and analysis of such case experiences be continued throughout the CPP for ISLM. In the Namibian context it would potentially be useful to undertake a detailed study that would document the key lessons learnt from various pilot interventions over the past decade (e.g. existing for Sardep (Kressirer & Werner, 2004); and for Napcod (Kressirer & Werner, 2005).

Existing internationally generic LUP guidelines

257. A summary of some of the key elements for standard LUP procedures as well as data needs are described in the following. Although the clinical application of the below cited FAO guidelines of 1993 has been criticised and subsequently improved on by adding critical process-oriented land use planning elements such as participation, setting of goals and visions, development of alternatives and strengthening negotiating skills (Dalal-Clayton et al., 2000), the technical guidelines are extremely useful for guiding the land use planning content. The proposed LUP toolkits (Appendix H.IV) ought to be seen in the context of the capacity development plans (Appendix H.V0, which clearly set a framework for bottom-up planning and capacity building activities as seen necessary and suitable by the local land and resource managers.

258. The proposed national assessment of land use impacts on environmental sustainability (Chapters 2 and 5) is designed to fill critical gaps in data and approaches towards technical components needed in support of meaningful land use planning in Namibia. A focus on an environmental sustainability context through assessing ecosystem services was introduced in Chapter 1. The assessment information will inform the technical content of the LUP toolkits, which will be supplemented by other available information and by locally generated knowledge and data.

259. Land use planning should always be needs-based conforming to requirements identified by key land managers in an area. Plans can concern individuals if they have distinct land use planning needs and objectives, or by groups for example in conservancies.

260. A more or less generic land use planning process can be described entailing the following significant steps (FAO, 1993; GTZ, 1999):

- Identify the LU problem and formulate the LUP objective(s)
- Identify other concerned stakeholders and their goals, needs and stakes
- Organise work to be undertaken and identify working team
- Analyse the key problems and collect relevant data
- Identify opportunities and options for development/change; consider smart technologies
- Evaluate land suitability/resources for options including based on environmental sustainability criteria and indicators
- Appraise the alternatives options: environmental, economic and social analysis
- Negotiate options and choose the best option for stakeholders; SLM information should include options for innovation and improvement
- Prepare the land use plan, include legal considerations
- Implement the plan!
- Monitor, revise and refine the plan; develop plans for other objectives

261. To be able to conduct certain of the above-mentioned steps successfully, as much background information as possible has to be gathered to facilitate the planning process and aid informed decision-making. Box 14 summarizes the suggested baseline information that ought to be considered according to FAO LUP guidelines. However, not all this information might be available for on-site planning and relatively easy assessment methods that could be applied to help establish some sort of a baseline are proposed herein. Alternatively extension personnel and experts should be invited to help with the planning process.

262. In the context of using LUP as a SLM tool, further information on “options” and “innovations” should be acquired. Although such information might not be integral part of LUP steps to be taken, it is important for (i) setting of objectives and (ii) identification of options in the land management context. As one of the aims of the LUP process is to empower the local level land manager to undertake own problem solving initiatives, it is essential to raise awareness on modern technical, technological and knowledge developments pertaining to LU and LM for optimal results.

Box 14: A summary of possible baseline information to be considered during LUP processes



6.4 CAPACITY BUILDING EXPERIENCES AND TOOLS FOR ADAPTIVE AND MANAGEMENT OF NATURAL RESOURCES

6.4.1 International and Namibian experiences in community-based approaches to natural resources management – lessons learnt for the ISLM framework

Internationally

263. The lack of effecting changes of land management actions on the ground has been identified as the key difficulty in achieving lasting SLM world wide. Similar experiences have been gained in the natural resource and biodiversity management and forest and conservation area management contexts. After experiences of the “green revolution, importing technical and technological interventions without building the capacities to apply these in implementation context, the past decades have focused on community-based approaches to resource management²⁴. Still, to date, we are lacking the large scale success stories that would make major contributions to economic and socio-cultural empower of entire developing country nations. Lessons learnt from international experiences point to the need of twinned approaches – (i) commitment to devolution of management (natural resources and

²⁴ Hulme & Murphee, 2002; O’Riordan & Stoll-Kleeman, 2002; Oglethorpe, 2002; Borrini-Feyerabend et al., 2004; Benjaminsen et al., 2004

others) to the lowest appropriate levels and continued investments into capacity building (including education), and (ii) strategic infrastructure and cash investments that could ignite larger scale development, including through appropriate technologies. Micro-level and macro-level interventions ought to be implemented hand-in hand, and the development and implementation of a suitable enabling environment are key²⁵.

264. The literature on case studies and examples of local level and community-based approaches in the natural resources and land management relevant fields is wide ranging. Technical discussion papers, methodologies and resource materials are available. Amongst some of the consulted references in preparation of this report are the ODI Natural Resources Perspectives series (www.odi.org.uk; e.g. Brown et al., 2002; Harrison et al., 2004; Farrington, 2001); the IIED Issue paper series (www.iied.org; e.g. Bonnet, 2000; Stamm, 2000; Brockhaus et al., 2003) and PLA Notes (see below on farmers action research). Various resource materials from the IUCN library such as resource books on practical tool such as by Borrini-Feyerabend, 1997 (reprinted 2000) and the ISLM M&E tool kits series (Herweg et al., 1999) were consulted. Although it is recognised that some of the references are out dated, they contain relevant elements that can be integrated into the Namibian LUP toolkit development and the design of the capacity building plans.

Namibia

265. For the past decade devolution of natural resource management responsibilities and rights has been engrained in the Namibian policy and legislative framework. A reform of land tenure arrangements is partially following suit, and a more or less conducive enabling framework for community-based natural resources management has been created. Limitations especially in the context of land use planning have been highlighted above.

266. A number of community-based resource management approaches have been implemented and are being tested in Namibia (e.g. CBNRM programme, National Programme to Combat Desertification (Nacod), Community Forest Programme, Sustainable Animal and Range Development programme (Sardep), Northern Livestock Development Programme (Nolidep), Farming Systems Research Project (FSRP)). Interventions from the environmental sector may differ in comparison to the agricultural, water or forestry sectors (which, should essentially be integrated), however most underlying principles are complimentary.

267. Key characteristics are:

- Establishment of community-based organisational structures, partially requested by relevant policy and laws; very important in instances where regulative functions are carried out;
- Participatory development of visions and work plans relating to the respective resources concerned;
- Some action programmes e.g. farmers action research including resource planning and adaptive management; formal employment e.g. as community game guards; training programmes;
- Promotion of incentive systems for participation e.g. through cash benefits, business opportunities, formal employment, capacity building opportunities

268. Approaches to local level LUP for ISLM will build on these experiences. Pilot areas (see section 0) are mainly selected on the basis that certain community-based structures exist and that the LUP capacity building interventions can build on previous community mobilization.

²⁵ e.g. DFID, EU, UNDP and WB, 2002; Niewoudt & Gronewald, 2003; Pierce et al, 2002

6.4.2 Capacity building instruments of use for LUP

Farmers Action Research Tools

269. Farmers Action Research tools that are strongly vested in participatory principles and approaches while building on explicitly developed community communication tools will be applied in the development of the toolkits and associated training modules. Extensive guidance based on international experiences exist, e.g. from best practices of interventions implemented throughout Africa facilitated by organisations such as the Food and Agriculture Organisation of the UN (FAO) (e.g. www.fao.org/bestpractices), the International Institute for Environment and Development (IIED) (www.iied.org) and their “Power Tools” project (www.policy-powertools.org) including also the “PLA and RRA Notes” (www.iied.org/NR/agbioliv/pla_notes), International Crops research Institute for the Semi-arid Tropics (ICRISAT) (www.icrisat.org), the International Livestock Research Institute (ILRI) (www.ilri.org), and a great number of other organisations. It is recommended that various options and methods related to LUP and SLM be tested before larger scale application of the training approach can be applied under the CPP for ISLM umbrella. Areas specific lessons learnt from Farmers Action Research experiences in Namibia should be synthesised be considered in the design of the learning modules.

Exposure visits and peer exchange

270. One method of training that has worked well amongst community members and farmers during other projects implemented in Namibia, and elsewhere, is peer interaction (DRFN, 2003; World Bank, 2003). It is recommended that exchange visits between communities that have gained experiences with LUP, especially in the application of the ILUP toolkits, and communities that have not previously engaged in such processes be organised. Guidelines on how to prepare such community visits have been prepared by DRFN and can be applied in the CPP through integration into ILUP toolkits.

Participatory M& E as integral part of capacity building plan

271. A strong monitoring and evaluation (M&E) component should be integrated into the capacity development plans at all levels (see Appendix H). It is envisaged that such M&E should be participatory, and engage the stakeholders actively to demonstrate progress immediately and with and to the people concerned. A number of tools exist in this regard and can be applied at the various levels (e.g. Guijt & Woodhill, 2002). Such assessment should also provide inputs into the potentially needed refinement and adaptation of the LUP tools and capacity building support interventions.

Interactive distance learning modules

272. Training modules for regional level practitioners will be developed in such a way that they can be broadcasted interactively to other pilot regions. The IUCN World Conservation Learning Network (WCLN) has committed initial funds for the development of a Namibia-based broad cast of a best practice for community action resource management and interactions with the regional level. See Appendix H for the outline of the initial proposal.

Toolkits

273. Providing methods and the means instead of simply identifying problems or defining aims encourages hands-on action. LUP tools are simply described methods that can be applied easily by the different stakeholders for whom they are designed. The tools provided should be problem and target group specific. Certain tools are designed for “mediators and trainers” whilst others can be applied by land and natural resource managers at a local and/or

regional level. The traditional “toolkit”, as per definition, incorporates additional sets of useful information. A selection of different tools and support materials are combined in a “kit” and its elements can be used as needed. Principles of a good tool include simplicity (ease of learning and communication), cost-effectiveness (in terms of money, time, skills and equipment) and transferability (ease of adaptation and legitimacy among new users (Vermeulen, 2005).

274. The possible design and content of a Namibian adapted LUP toolkit is included in section 6.6 below. The application of the LUP toolkit is operationalised through the implementation of an intensive capacity building plan specific for the various stakeholder levels.

Incentives for broad scale application of toolkits

275. It is difficult to guarantee that the developed tools, after successful testing and potential adaptation, will be up-scaled and internalised by the relevant institutions. It is clear that a good part of PESILUP and other related efforts will have to concentrate on working with collaborators and demonstrating the usefulness of the developed tools. It is in no ones interest to develop intricate tools which later will not be made use of! Any smaller intervention will benefit from the existence of a long-term CPP for ISLM umbrella programme, which will be better equipped to engrain the under the umbrella generated outputs into mainstream government work, and in the work of non-governmental partners. Coalition-building will be key to the success of the CPP SLM interventions. By linking the selection of PESILUP intervention pilot sites (see section 6.7) to criteria such as teaming up with existing local and regional level institutions and interventions is an important strategic element in the proposal.

276. Further it will be important throughout the implementation process to formulate strong and direct messages on the incentives and benefits derived from applying the LUP tools for different user groups. Amongst such incentives one scenario specific to MLR could be: The Land Use Planning and Allocation (LUPA) Division of MLR, clearly tasked with a strong LUP mandate in central Government, is expected to use the PESILUP for example as an excellent capacity strengthening opportunity (i) for Ministry staff, both based in Windhoek or other planners in regional office, and (ii) for communities and/or organisations on local and regional levels. An association with and active involvement in the project development should have fostered good level of ownership, especially amongst the relevant line ministries committed to the CPP.

277. Even if it may be perceived that the focal area of a smaller intervention such as PESILUP may not be in line with current LUPA priorities of work programme, which is mainly focusing on land reform, the value added of a project under the CPP such as PESILUP could be generating strong spin-offs and implementation effects on the ground. The development of nation-wide agreed to standards for environmental sustainability of SLM, including LUP, could solve current problems in terms of land assessments and valuation, and could lead to a more integrative policy and legal framework, clearly of interest to MLR.

278. Of concern are issues such as cost-effectiveness of the intervention, the potential trade-offs and potentially constraining impacts of power relationships, which will have to be considered throughout the implementation phase of the project.

279. The interventions proposed to take place under the PESILUP project are designed in a way that after the intensive output development period, the finally fully operational and developed outputs can be applied more broadly and less costly through (i) the second phase of the CPP for ISLM and (ii) the more fully integration of the outputs into the work of relevant line ministries.

280. As for the CPP second phase, this approach is clearly engrained into the CPP design, and the development of appropriate financing strategies is integral part of phase one of the country programme. It is well understood that PESILUP should not produce expensive tools which would not be applied to improve land use planning and SLM. Although being of piloting character, the demonstration of impacts of the tools and capacity building efforts are

of highest priority. Investments into intensive capacity strengthening remain a key bottleneck to effective implementation of SLM practices at all levels.

6.5 CAPACITY BUILDING PLAN & CONTENT OF ILUP TOOL KITS – RECOMMENDATIONS FOR NAMIBIAN APPROACHES AND METHODS

281. Stakeholder participation and integration are key to the approach of developing a LUP toolkit and supporting capacity building plan. What is outlined and conceptualised in the following is based on preparatory consultations in Namibia, and should be refined, adapted and agreed to by user groups. The design of the project implementation should include sufficient “space” and “feedback” loops for testing and adaptation of the outputs throughout the project period.

282. The development of LUP capacity building interventions has to be needs based and their implementation ought to be linked to a broader and longer-term capacity development strategy relating to ISLM in Namibia to be effective. The planned interventions should be designed to address key elements of the proposed capacity building plans. Embedded in the CPP for ISLM programme umbrella, the materials and capacity development plans feed into the long-term capacity building objective of the CPP.

6.5.1 Content of ILUP toolkits

283. It is recommended that the Namibian ILUP toolkits contain components on (i) guidance on formal ILUP process/steps, (ii) a core set of obligatory/widely applicable learning modules, (iii) a suite of pilot site specific learning modules, (iv) collection of reference sheets explaining a set of useful (learning, technical) tools, (v) pilot site specific relevant information (e.g. maps, existing plans for the area) and (vi) technical equipment needed for undertaking ILUP (if relevant, the methods applied are developed to be simple and applicable with little hardware requirements).

Box 15: Recommended use of existing procedures and methods for LUP in Namibia

- simplify and break down existing resource materials into practical decision making tools for easy application on the local level;
- develop and refine in form of Namibia-adapted toolkits;
- popularise and promote adoption and application of the tools through special training and capacity building activities along with focused dissemination;
- include gender specific land use planning and capacity building approaches in the Namibian LUP tools;
- address the impacts of HIV/Aids including long-term and succession planning as a priority social issue impacting on LUP and SLM.

284. It is important to integrate elements of (a) gender and (b) HIV/AIDS prevention and planning in the content of the toolkit material. Namibia's HIV prevalence is 19.7% in 2004 (from 22.3% in 2002) for the entire country, but in some areas it is much higher, varying up to 43%²⁶. Gender based training is relevant especially when considering the power relationships and individual roles as relating to land use planning and land and natural resources management. How the selection of trainees and the type of training material can influence gender relations should be considered in some detail (see also section on power analysis). HIV/Aids should be considered not only from an awareness raising point of view, but needs to be mainstreamed systematically and made relevant to ILUP training. For example action research elements could focus on analyzing with the trainees how HIV/Aids

²⁶ An HIV/AIDS Sentinel Survey is conducted anonymously in even years (most recently 2004) on women giving birth at government health clinics and hospitals.

affects resource management and ILUP capacities, how planning could help address better access to resources by sick people or people who have to care for sick family member and may have less energy and time to collect fire wood or other natural resources. Use patterns could be mapped and strategies be planned that would keep resource reserves closer to the villages and homesteads for sick people to use. Appropriate and easier technologies could be explored in the future options element of ILUP.

285. It should also be noted that elements of the content for the toolkit will be generated based on the outcomes of the PESILUP national assessment of land use impacts on environmental sustainability.

6.5.2 Capacity building strategy

286. The capacity building strategy is closely interlinked with the content and approach of the planning tool kit, and elaborates training approaches and dissemination elements.

287. For regional/local level capacity building for integrated land use planning four different strategies should be developed:

1. local/constituency level
2. regional/constituency level
3. local/constituency/regional level interaction
4. link to national level decision makers

288. It is situation specific if constituency level organization/decision-making bodies should be included in the local or regional level capacity plan, respectively. Detailed proposals of a suite of elements for such plans are included in Appendix H, and can be used in the planning for PESILUP. They are designed as “options” and need not to be implemented at each pilot site (see next section) in the same fashion. A suite of most appropriate, site specific priority interventions can be chosen, and should be agreed to at the various intervention levels. Such adaptive “selection of menu items” will also have budgetary implications. Currently the indicative budget included in section 6.8 includes the costing of a “complete” capacity building menu.

6.6 SITE SELECTION AND HIERARCHICAL PILOTING APPROACH

289. A hierarchical pilot site approach is suggested, with activities of varying degrees of intensity are planned for different level sites. In the proposed design three levels of interventions are distinguished: (1) six level 1 sites at which full capacity building programmes will be implemented are proposed. (2) Additionally level 2 sites associated with other ongoing CPP activities will integrate the tested toolkits into the activities of other CPP ventures such as Integrated Water Resources Management (IWRM), Climate Change Adaptation (CCA), and the Enhancing Institutional and Human Resources Capacity through Local Level Coordination and Integrated Land Use Planning, Management and Support Programme (CALLC) (see details below). (3) Level 3 interventions relate to the participation of all regions in a planned national workshop.

290. The pre-selected pilot regions have been determined based on the “activity regions” of the CPP, and have been confirmed through a series of consultation. Final site selection should take place in consultation with the PESILUP implementing agency and be confirmed with the stakeholders on-site.

291. A set of criteria applied to the selection of sites includes:
- Priority/target region identified under CPP
 - Community institution/CBO operational
 - Collaborations exist (e.g. through CBNRM programme) and value can be added through PESILUP interventions (contribution to longer-term capacity building)
 - From a logistical point of view relatively cost-effective (distance from Windhoek, accessibility, relative closeness of pilot sites)

292. It is realised that the selection of pilot sites, location and numbers thereof, will have to be linked to the available budget. At this stage the conceptualised theoretical capacity development plans and planned interventions are also proposals from which a suite of priority and site suitable interventions could be chosen. It is anticipated that a final budget will be agreed to during the PESILUP project proposal finalisation and that the activity plans and pilot site selection will be refined in the early PESILUP inception phase. This approach does not impair the effectiveness of the proposed capacity building interventions, but allows for the selection and adaptation of suited intervention plans.

293. Table 17 depicts a proposed activity plan as per pilot site and level, based on the detailed capacity development plans in Appendix H.

6.7 OPERATIONALISATION OF TOOLKITS AND CAPACITY BUILDING PLANS

294. Realistically it is recommended that a consultant/team of consultants facilitate the development of the proposed LUP toolkits. The development and confirmation of the LUP specific capacity building plans with the pilot communities and stakeholders at other relevant levels should be facilitated by partner organisations already working at these sites, where possible (e.g. through projects such as ICEMA, community forest projects).

295. Initially the training/introduction of the toolkits would be coordinated by the PESILUP grant recipient with support from a consultant/team of consultants. The capacity building plan is designed in a way that “training of trainers” is a focus. This means that extension personnel of line ministries tasked with LUP relevant mandates, staff of NGOs, perhaps members farmers associations, interested community leaders and individuals would be trained in implementing the toolkits at various levels, as requested.

296. Incentive issues to do so (see section 6.5.2.6) ought to be addressed. In the case of government and NGOs mainstreaming of LUP capacity building as a major responsibility could be envisaged; incentives at other levels might be harder to set, but might include payment schemes for formal “trainers”.

297. The timing of the various PESILUP activities remains an issue to resolve. Whereas it is planned to carry out the national assessment work during the first 18 months of the project (Chapter 2), there could be different options for the timing of the ILUP toolkit and training. The following considerations ought to be made:

1. The content of the ILUP toolkit will depend, at least partially, on the results from the national assessment;
2. Draft toolkits can, however, be developed based on pilot-site basis and later be complemented with the national assessment results;
3. Capacity building activities and interactions with communities, as well as on the regional level, usually need a long “run on” time before they fully take off. Thus, even if partnerships and collaborations on site already exist, it would be desirable to initiate interactions as soon as possible after inception of PESILUP;
4. The work load of condensing all capacity building elements to the last 18 month of the project would be very intense and hard to achieve.

298. It is recommended that PESILUP focus its work in a relatively narrow set of pilot areas, whilst systematic up-scaling and rolling-out of the approach will commence over a much longer time period in the scope of the CPP for ISLM. A key strategy is that the toolkits and the capacity building approach will be internalised by the various line ministries and other organisations with a LUP mandate. Specific provisions for preparing the outputs for up-scaling ought to be made in a PESILUP work plan, through strong linkages with the CPP.

6.8 BUDGETARY CONSIDERATION

299. Appendix I includes an indicative budget providing indications of how much financing would need to be required to carry out the national assessment as proposed.

Table 17: Proposed activity plan as per pilot site and level

Pilot regions	Proposed sites	Local level	Regional level	National level	Other initiatives
<i>LEVEL 1 INTERVENTIONS</i>					
Kavango	To be determined	<ul style="list-style-type: none"> Inception community workshop Suite of action research training modules following ILUP toolkit (demand driven tailored) Expert visits/interactions Peer visits – “Ecosystem approach” Local/regional interaction 	<ul style="list-style-type: none"> ILUP workshop (2 to 4 days) Additional training on ILUP toolkit elements (demand driven tailored) Expert visits/interactions Peer exchange – interactive learning modules and up-scaling Local/regional interaction 	<ul style="list-style-type: none"> Pilot site visits National workshop 	NNF; Every Rivers Community Forestry (DEED)
Hardap	To be determined	<ul style="list-style-type: none"> Inception community workshop Suite of action research training modules following ILUP toolkit (demand driven tailored) Expert visits/interactions Peer visits – “Ecosystem approach” Local/regional interaction 	<ul style="list-style-type: none"> ILUP workshop (2 to 4 days) Additional training on ILUP toolkit elements (demand driven tailored) Expert visits/interactions Peer exchange – interactive learning modules and up-scaling Local/regional interaction 	<ul style="list-style-type: none"> Pilot site visits National workshop 	Conservancies NACOMA
Otjozondjupa	To be determined	<ul style="list-style-type: none"> Inception community workshop Suite of action research training modules following ILUP toolkit (demand driven tailored) Expert visits/interactions Peer visits – “Ecosystem approach” Local/regional interaction 	<ul style="list-style-type: none"> ILUP workshop (2 to 4 days) Additional training on ILUP toolkit elements (demand driven tailored) Expert visits/interactions Peer exchange – interactive learning modules and up-scaling Local/regional interaction 	<ul style="list-style-type: none"> Pilot site visits National workshop 	Conservancies
<i>LEVEL 2 INTERVENTIONS</i>					
Caprivi	To be determined		<ul style="list-style-type: none"> Peer exchange – interactive learning modules and up-scaling (Satellite transmitted distance course) 	<ul style="list-style-type: none"> National workshop 	Regional land use plan (ICEMA, IRDNC, and other)
North-central	To be determined Anamulenge (CCA)	<ul style="list-style-type: none"> Application of toolkits and reduced capacity building plan at CCA sites 	<ul style="list-style-type: none"> Application of toolkits and reduced capacity building plan at IWRM and CALLC sites Peer exchange – interactive learning modules and up-scaling (Satellite transmitted distance course) 	<ul style="list-style-type: none"> National workshop 	CALLC (Oshikoto) CCA (Omusati) IWRM (various sub-basins of Cuvelai system)
<i>LEVEL 3 INTERVENTIONS</i>					
All regions				<ul style="list-style-type: none"> National workshop 	
Relevant stakeholders facilitated through CPP				<ul style="list-style-type: none"> Revision/development of ILUP training curricula and institutionalization of toolkits and capacity building programme Policy revision and improvement 	

Chapter 7

7 Findings and recommendations

300. Chapter 7 aims to synthesise some of the key findings across the Chapters, and interpret them in an integrated manner. A synthesis diagram, indicating the various Chapters and the linkages amongst them is depicted in Figure . A set of key messages (section A) have been formulated, integrating key findings from the various Chapters as relating to key contribution areas of the framework (1) enabling environment, (2) tools, implementation and capacity building, and (3) knowledge generation. Final recommendations (section B) for priority actions to be implemented in Namibia to promote environmental sustainability in SLM through improved land use planning are summarised.

301. It has been proposed that the key findings become part of a policy briefing, which should be widely disseminated amongst key decision makers in Namibia. Parliamentarians, other policy makers and technical personnel in line ministries and relevant non-government institutions should be the primary targets of such briefing.

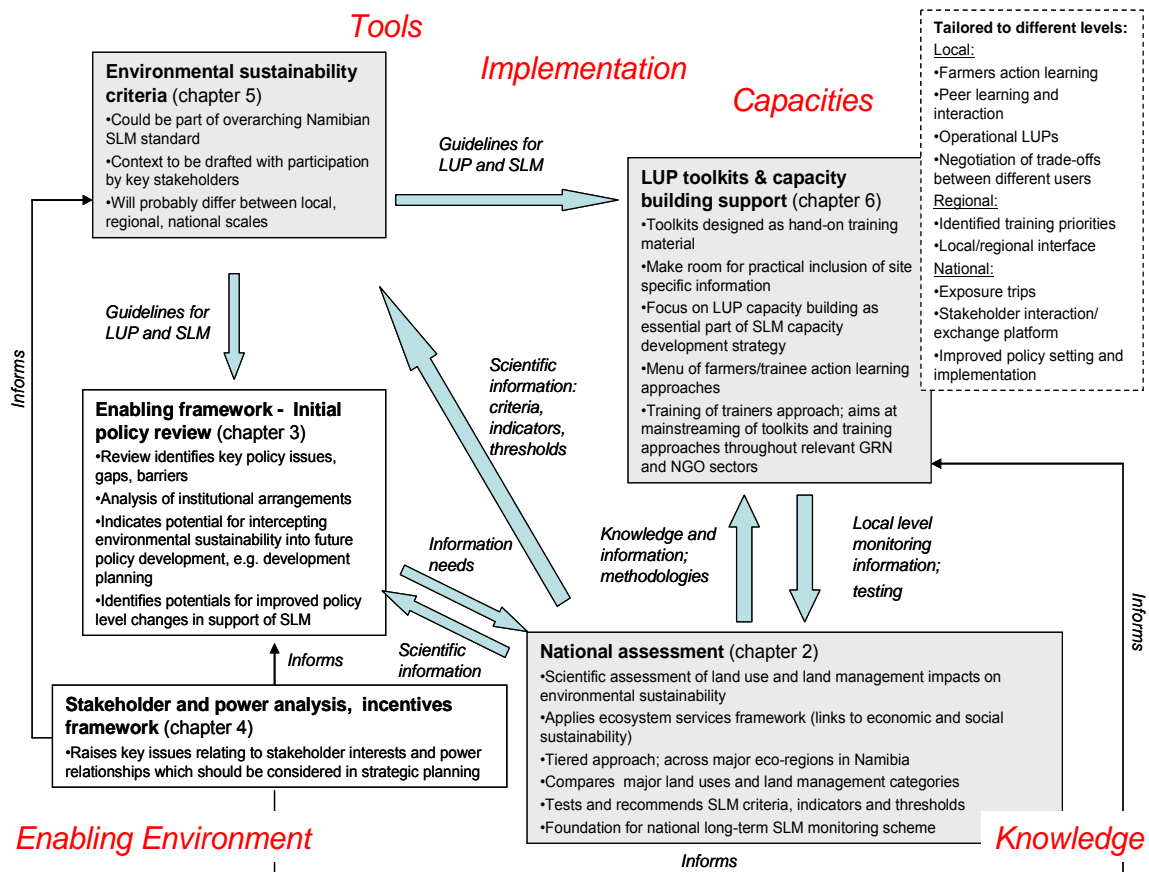


Figure 10: The linkages of the various report Chapters are depicted. From the analysis is clear that strategic interventions in three key contribution areas i.e. relating to (1) enabling environment, (2) knowledge and (3) tools, implementation and capacities for land use planning can help to advance environmental sustainability of SLM.

The captured key messages of the study report are described below in following sequence:

1. Improved LUP and ISLM
2. Environmental sustainability consideration in Namibian
3. Strengthening the enabling environment for ISLM and LUP impacts
4. Addressing capacity gaps for ISLM and LUP at all levels
5. Incentives for SLM in Namibia
6. Priority Actions to be considered

A. KEY MESSAGES

302. **Improved land use planning is key to integrated sustainable land management.**

- Land use planning can **facilitate the efficient use and management of resources**, the negotiation and most beneficial **integration of “parallel” land uses of different users** and interest groups. It may also **foster the diversification of the rural economy** through improved knowledge about land use and livelihood alternatives. In Namibia, where more than two thirds of the population depend directly on subsistence farming for their daily livelihoods investments into improved - or at least sustained - utilization and value generation from the natural resource base are essential (Chapter, 1, Chapter 4, Chapter 6).
- In the context of Namibia’s **land reform scheme**, it would, for example, be useful to **strengthen land use planning capacities of the beneficiaries to better equip them to chose and apply the most appropriate land uses and land management practices** on site to guarantee success of the venture (Chapter 1).
- It is recognized that we currently have **little systematic knowledge about neither the most suitable land uses as per ecological zone nor the environmental impacts of current uses**. Generation of such understanding would make major contributions to standard setting the development of agreed to criteria for environmental sustainability and ultimately SLM (Chapter 2, Chapter 5).

303. **Environmental sustainability considerations are not currently systematically addressed in land use planning procedures and processes in Namibia.**

- Namibia’s overall development and planning environment as framed by a range of policies and regulations, is generally informed by sound environmental sustainability principles. This should create a generally enabling environment for ISLM (Chapter 3).
- However, it is equally observed that a **multitude of sectoral policies that have been formulated around the prominent issue of land reform, allocation, use and management as well as agricultural development do not integrated environmental sustainability criteria**; especially in view of land tenure reform, one of the top priorities of the Namibian government, relevant policies lack meaningful environmental considerations, which would lead to improved land management (Chapter 3, Chapter 5).
- **There is a strong notion that land reform affords the Namibian Government a strong opportunity to incorporate and mainstream prudent environmental sustainability considerations through ILUP and SLM for example throughout its resettlement and tenure reform schemes (Chapter 1, Chapter 3).**

304. **The enabling environment needs to be further strengthened to leverage visible ISLM impacts, including of LUP.**

- The development of policies, promulgation of laws and institutional arrangements has continued to be pursued on sector by sector basis. This has resulted in duplication of functions, creation of parallel institutions with overlapping or conflicting mandates and functions which may defeat the goal of SLM (Chapter 3, Chapter 4).
- Especially where it comes to the **devolution of resource management** responsibilities

and rights, i.e. of land and natural resources, **little progress has been made to date to effect policy directives. Lack of capacity, skills, expertise and experience are pervasive problems** throughout all established and newly constituted land related institutions and bodies which hinder the efficient implementation of all the SLM friendly policy and legal provisions. Weak capacity of the human resource base in many structures is further exacerbated by budgetary limitations and material shortcomings (Chapters 3, 4 and 6).

- **In spite of a conducive and enabling policy or legal framework and an extensive institutional set up for sustainable management of natural resources, concrete implementation of SLM and LUP on the ground is lacking. Immediate measures such as rapid assessments, broad based agreement on environmental sustainable criteria, development and use of SLM toolkits and other interventions are needed to correct the situation (cross-cutting).**

305. **Capacity gaps for ISLM and LUP at all levels, local, regional and national, exist and need to be addressed as a matter of urgency**

- Traditional and other current management practices may contribute to the sustainable use and management of land. However in **Namibia it needs to be tested more systematically which management practices do indeed contribute to SLM and should be promoted** (Chapter 2, Chapter 6).
- The **MLR recognises ministerial capacity bottlenecks in rolling out and up-scaling interventions that would support natural resource managers, farmers and resettlement farmers in improved land use planning and management.** This is also true for capacity support to CLBs and other relevant regional institutions.
- **Existing land uses and management practices can contribute to SLM.** Some examples include traditional water harvesting techniques, water storage and conservation measures, reuse of safe and treated wastewater for irrigation, afforestation arresting soil erosion and improving ground water recharge, conservation of agrobiodiversity through diversification of crop patterns, and intensification of agriculture using technologies that do not increase pressure on dryland services. Such best practices should be promoted through LUP and SLM tools (Chapter 1, Chapter 6).
- **Practices that promote the participation of local land and natural resource managers and users**, i.e. farmers, and community based organizations (CBOs), and interactions amongst stakeholder groups, **are considered enabling.** There are a great number of lessons learnt from international and Namibian experiences in this context that can be drawn on and/or linked up with in the preparation and implementation of the PESILUP project, i.e. the **development capacity building plans with key target groups** (Chapter 6).
- Situation and context **specific LUP planning tools should be developed**, adapted to the eco-regional context of the site, and well informed by sound scientific information and methods (Chapter 2, Chapter 6).
- It is important that application and use of the planned LUP toolkits will be **supported through special training modules**, embedded in a larger capacity building plan i.e. under the CPP for ISLM (Chapter 6).

306. **Incentives for SLM exist for various important stakeholder groups and new and additional ones should be developed.**

- Various **incentives exist or can be devised to encourage ISLM** by government, local resource user in communal and freehold areas; where disincentives exist these can be coined into opportunities through direct interventions. **It is important to highlight and communicate the values of SLM appropriately, as stakeholders may not be naturally aware of them** (Chapter 3, Chapter 4, Chapter 6).
- Incentives for **government** include that the devolution of natural resources management rights and responsibilities to the level of the resource user, important to ISLM, **reduces the human resource and financial load currently resting on Government.**

- Investments into local and regional capacity building e.g. through support interventions can catalyze important case examples and **demonstrate practical approaches to the devolution of resource management capacities** and inter alia the implementation of policies (Chapter 4, Chapter 6).
- The development of broadly agreed to SLM standards and associated environmental sustainability criteria should greatly **facilitate enforcement of policies and regulations through government**. This is for example true for the more equitable and systematic valuation of land (Chapter 2, Chapter 5).
 - **For local level resource users resolving tenure insecurity is a key to ISLM**. Beyond that in the communal areas context, **enriched knowledge, skills and capacities to plan and manage land and natural resource use can open up completely new livelihood opportunities** (Chapter 4, Chapter 6).
 - **Economic incentives** associated with the **promotion of environmentally more suitable or the demotion of less sustainable land uses** can be a powerful tool both in the communal and freehold contexts. There is a realisation that members of the various target groups are not readily aware of the benefits and values arising from engaging in SLM (Chapter 4, Chapter 6).
 - Planned interventions may change existing power relationships at various levels through empowering formerly weaker stakeholders and engaging them into the LUP process. This can create an incentive trade-off between different stakeholders. It is important that such social side-effects are being observed and reacted to through adaptive management (Chapter 4, Chapter 6).
 - The CPP framework places a strong emphasis on incentive development and linkages with LUP activities should be maximised.

307. **Project interventions under the CPP for ISLM need to focus on the demonstration of real impacts/ improvement of environmental sustainability and ultimately livelihood improvements.**

- The lack of effecting changes of land management actions on the ground has been identified as the key difficulty in achieving lasting SLM world wide. After experiences of the “green revolution, importing technical and technological interventions without building the capacities to apply these in the implementation context, the past decades have focused on community-based approaches to resource management. Still, to date, we are lacking the large scale success stories that would make major contributions to economic and socio-cultural empower of entire developing country nations (Chapter 6).
- Lessons learnt from international experiences point to the need of **twinned approaches** – (i) **commitment to devolution of management** (natural resources and others) to the lowest appropriate levels and continued investments into capacity building (including education), and (ii) **strategic infrastructure and cash investments** that could ignite larger scale development, including through appropriate technologies. Micro-level and macro-level interventions ought to be implemented hand-in hand, and the development and implementation of a suitable enabling environment are key (Chapter 1, Chapter 3, Chapter 6).
- LUP interventions, embedded into the longer-term CPP for ISLM country framework, should focus on demonstrating real term environmental sustainability and livelihood improvements at certain pilot sites, whilst achieving up-scaled, broader-based impacts through the second phase of the CPP. Through selecting pilots and building smart partnerships with communities which already have established CBO structures, relatively short-term pilot project interventions can contribute to a longer-term capacity building strategy on site (Chapter 6).

B. PRIORITY ACTIONS

308. The analysis has identified three key contribution areas for improved SLM, including through LUP:

- Enabling environment
- Knowledge
- Tools, implementation and capacities

309. It is clear that support interventions will have to be planned in the long-term to address all priority areas, however it is similarly identified that well targeted priority actions can act catalytic and potentially capitalize on major improvements. Priority actions are formulated based on the analysis provided in the report. They are structured according to the three contribution areas identified above, with one additional section on (4) “Other”, including more practical considerations such as financing, cost-effectiveness and long-term viability.

Enabling environment

- The CPP for ISLM provides a useful framework for addressing issues that would promote the furthering of the enabling environment over a medium to longer-term time horizon. All for LUP relevant line ministries are partners in the CPP. Thus a platform for discussing, coordinating and generating political interest and support for SLM, LUP and environmental sustainability has been created. It is important to operationalise the CPP and to link other interventions under the umbrella.
- The proposed LUP interventions should form one integral part of the CPP. Especially the facilitation of the development of environmental sustainability criteria, which would be a part of establishing a national SLM standard, and eventually SLM guidelines (see (3) Tools, implementation and capacities) would need to be embedded in a long-term context. The in this report proposed interventions would coordinate stakeholder processes relating to the establishment of such tools, as well as the project see to the scientific underpinning thereof (see (2) Knowledge).
- Various suggested outputs from the proposed LUP interventions target the policy maker level. Results from the national assessment (Chapter 2), the environmental sustainability criteria development process (Chapter 5) and from the LUP capacity building (Chapter 6) are proposed to directly address and inform policy makers.

Knowledge

- The initial policy and situation analysis in this report has identified key information needs in terms of land use planning and ultimately SLM. A specific LUP project should be designed in a fashion that it would address some of the priority needs. One priority is to enlighten land use planners (defined at three levels: local, regional and national) as to what are the best (environmentally, but also economic and social) land use and land management options in a specific eco-regional context in Namibia.
- An assessment should be carried out to generate urgently needed reliable knowledge and to test methodologies for a national SLM monitoring scheme (i.e. PESILUP/ CPP for ISLM).
- The assessment has to be designed in a way that it tests and scientifically underpins the development of broadly agreed to environmental sustainability criteria, and established the indicators and thresholds that determine sustainability.
- The generated knowledge can be further applied and operationalised through the integration into LUP toolkits (see (3) Tools, implementation and capacities). Use of knowledge generated from the national assessment would be maximised.
- Inter-linkages with local level monitoring (LLM) methods tested through other

- planned/ongoing interventions under the CPP may be established in two ways: (i) the national assessment would test and recommend improvement of methods, and (ii) information generated from LLM could potentially be linked to the further refinement of the a national SLM monitoring scheme.
- Currently the assessment is designed as a once-off activity; however the results from it will determine whether periodic updates should be required to optimise the Namibian knowledge base for SLM.

Tools, implementation and capacities

- The analyses of this study point to the fact that key capacity bottlenecks relating to SLM (and LUP) exist throughout the wide ranging SLM stakeholder community. Lack of knowledge and skills are particularly pertinent, although a lack of financial resources and equipment also exist. The implementation of a generally quite progressive policy framework as relating to environment and especially the devolution of land and natural resources management rights and responsibilities is lacking far behind.
- To address such capacity gaps (i) the tools and information (see (2) Knowledge) are needed to generate improved capacities, and (ii) targeted investments strengthening implementation i.e. through capacity building are required.
- It is recommended that PESILUP invests in the development of specific and strategic “tools” i.e. the development and testing of (i) environmental sustainability criteria, and (ii) LUP toolkits. The criteria would be one integral part of the toolkit, which in addition would contain information on formal LUP procedures, local information needed to LUP (or the methods of how to generate them), and guidance on how to facilitate participatory LUP.
- Such toolkits would be designed especially for two operational levels, (i) the local resource user level and (ii) the regional (mainly planner and facilitator) level.
- To ensure that impacts of improved SLM and environmental sustainability on the ground are demonstrated, a intense capacity building support element fostering the application of such toolkits should be applied with the support of CPP.
- It is suggested that the approach will be tested in a set of pilot areas, which should be selected based on criteria including the identified need for LUP capacity, already existing community structures and cost-effectiveness.
- It is important that the final capacity building plans and the toolkits are tailored to the needs on-site and be developed in a participatory manner. The currently proposed design has been based on preliminary stakeholder consultations, lessons learnt form other interventions and is flexible enough to accommodate major stakeholder inputs and requests.
- The capacity building plan should entail an element of participatory M&E, (i) to demonstrate the effectiveness of the intervention to participants, (ii) generate lesson learnt that can be communicate easily, and (iii) provide feedback to the project management and the CPP on the impact of the project.
- (4) Other important considerations – operationalisation of interventions
- A relatively “small” intervention - a medium-sized GEF project usually leverages up to 1 Mio US\$ external financial support, in addition to co-financing and counter-part financing (e.g. Government contributions, both in cash or kind; associated funds from other donors and private investments), it is important to receive maximum collaboration, support and commitment from all partners involved.
- PESILUP can strongly benefit from the integration into a country umbrella programme for ISLM, the CPP, and the intervention should be designed in a way that it maximises linkages especially for the later up-scaling and rolling out of the results and developed products beyond the pilot areas.
- This report has made a strong case for why it is important for Namibia to strengthen environmental sustainability considerations in land and natural resources related decision making, and how, through strategic interventions, capacities for improved LUP can be build. It is strongly recommended that the relevant authorities concerned with LUP, i.e.

MLR, MET, MAWF, MLRGHRD, NPC, various NGOs, take note of the priorities and take up active roles in PESILUP and the CPP for ISLM.

310. Some of the key messages derived from the cross-cutting synthesis of the report are generic and have been identified in various contexts relating to natural resources management and rural development. However, their practical interpretation and application in the identification of priority action for Namibia have placed them in a specific context. It is hoped that this report makes a contribution to the current SLM debate, the formulation of effective hands-on interventions, and will be used by decision makers and key stakeholders to further shape and implement the SLM agenda in Namibia, and elsewhere.

Appendix A: References as per Chapter

The references are presented as per chapter. They include references cited in the chapter related appendices.

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