

LANDS OF THE POOR

Local Environmental Governance
and the Decentralized Management of
Natural Resources



United Nations Capital Development Fund

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Local Environmental Governance and the Decentralized Management of Natural Resources

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Acronyms and Abbreviations

CBD	Convention on Biological Diversity
CDD	Convention to Combat Desertification
DFID	Department for International Development (UK)
DNRM	Decentralized Natural Resource Management
GEG	Global Environmental Governance
HDI	Human Development Index
IFAD	International Fund for Agricultural Development
LDCs	Least Developed Countries
LDP	Local Development Programme (UNCDF)
LDF	Local Development Fund (UNCDF)
LEG	Local Environmental Governance
LG	Local Government
LGU	Local Governance Unit (UNCDF)
MDGs	Millennium Development Goals
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
NRM	Natural Resource Management
PRS	Poverty Reduction Strategy
PRSP	Poverty Reduction Strategy Paper
SADC	Southern Africa Development Community
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
WB	World Bank

Foreword

This paper focuses on local environmental governance and decentralized natural resource management. It has overlapping and complementary objectives: to review the lessons learned so far from past and ongoing UNCDF projects; to better understand current thinking and debate on environmental issues; to position UNCDF in the context of the environmental policies adopted by major funding institutions and define its niche; and, finally, to provide directions for further action-oriented exchange and debate.

As the focus on the degradation or destruction of the earth's resources has sharpened, environmental issues have taken centre stage, particularly in developing countries. One of the aims of the *Millennium Development Goals* (MDGs), an agenda established by world leaders at the United Nations Millennium Summit and adopted by the General Assembly in September 2000, is to ensure environmental sustainability; with the specific target of integrating the principles of sustainable development into country policies and programmes and reversing the loss of environmental resources.

By reaffirming the principle that governance and sustainable development are closely intertwined, the 2002 *World Summit on Sustainable Development* in Johannesburg highlighted the importance of a viable, acceptable and sound institutional framework, from local to international levels, as the basis for development that focuses on future generations. The *World Summit Implementation Plan* emphasized the role of local governments in the implementation of Agenda 21 and the outcomes of the Summit, and strongly encouraged partnerships within and between local authorities and other levels of government and stakeholders as a means of advancing sustainable development.

In accordance with its mandate to reduce poverty in the Least Developed Countries (LDCs), the United Nations Capital Development Fund (UNCDF) is fully committed to implementing the recommendations of the World Summit and achieving the Millennium Development Goals.

UNCDF currently specializes in two areas, supporting decentralized public investments (through local governance) and small-scale private investments (through micro-finance). In local governance, UNCDF projects aim to promote good governance at the national and local levels, reinforce human and institutional capacities, reduce the vulnerability of the poor and protect the environment.

One goal of its strategic results framework specifically aims “to increase sustainable access of the poor to basic infrastructure and public services as well as to productive livelihood opportunities, through good local governance and enhanced natural resource management”. UNCDF has a comparative advantage in piloting small-scale decentralized public investments and paving the way for their replication on a larger scale by other development partners.

This book – which should be read in parallel with the UNCDF book on local governance and poverty reduction, *‘Empowering the Poor’* - adopts a ‘learning by doing’ approach: reviewing and analysing current thinking and debate on environmental issues in order to build a coherent policy framework, and identifying a number of appropriate strategic measures. The essential elements of this paper were presented at a workshop in Cotonou, Benin, in 2000, and discussed by UNCDF technical advisers, programme managers and coordinators of UNCDF projects in West Africa and Madagascar. LGU members and external resource persons subsequently commented extensively on a revised version of this paper. The approaches presented here have already provided a conceptual framework to a number of new UNCDF projects.

At UNCDF we are fully committed to the political declaration of the 2002 World Summit, which states that “poverty eradication, changing consumption and production patterns, and protecting and managing the natural resource base for economic and social development are overarching objectives of, and essential requirements for sustainable development”. We also fully endorse the opinion that the failure to adequately protect the environment and support human development is largely due to a lack of coherent and integrated global-local frameworks for sustainable development.

At the local level, through support to local governance, UNCDF contributes to the search for a more balanced and comprehensive approach that embraces political, economic, social and ecological concerns.

UNCDF projects are likely to have a considerable impact by consistently applying the principle of local environmental governance and instituting sound environmental paradigms in order to sustain local livelihoods and reduce poverty.

A handwritten signature in black ink, consisting of a large, stylized initial 'K' followed by a series of loops and a final flourish ending in a dot.

Kadmiel Wekwete
Director, Local Governance Unit
United Nations Capital Development Fund

Overview

This paper argues that good, local-level mechanisms for environmental governance are not only likely to lead to productive natural resource management practices that improve the productivity of local rural economies and increase economic growth, but also to increase awareness of the importance of environmental issues, enhance local responsibilities and accountability and, finally, strengthen local democracy.

Part I analyses the main elements of the current debate on environmental issues and sustainable development. Chapter 1 argues that environmental degradation and natural resource depletion are both the cause and the result of a number of complex factors. Ecological factors, such as water shortage, deforestation, soil nutrient depletion and the like have a profound impact on local livelihoods, threatening the survival of the rural poor who depend on the resource base. Rural people's relationships with their productive renewable natural resources are also affected by legal and legislative frameworks. By asserting the pre-eminence of the central State over land, these have reduced incentives for users to protect their resources, destabilized existing land use systems and increased general land insecurity. In a situation where poverty and the environment are closely intertwined, the development of serious conflicts over the control and use of natural resources makes local producers increasingly vulnerable.

Chapter 2 reviews a number of cross-cutting issues that inform current debate on the sustainable use and management of natural resources. This chapter also analyses certain aspects of the environmental approach adopted by major international funding agencies and the governments of developing countries. The importance of the concept of 'local environmental governance' is stressed: as an integral part of the wider notion of 'local governance' or 'democratic governance', this concept defines the capacity of local stakeholders (more particularly, freely elected local authorities) to manage their relationships with the physical environment in accordance with the principles of participation, transparency, efficiency, equity and accountability. The last decade was marked by growing recognition of the fact that many environmental problems have their roots in institutional failure and poor governance, and that decentralized and democratic governance is the key to sustainable

development and poverty reduction. However, despite a favourable legal environment supporting the direct involvement of local communities in environmental management and defining new environmental roles for local governments and communities, the devolution of environmental management responsibilities to local authorities and communities has had a mixed record. There is a need for new approaches that reflect a more balanced understanding of the complex, multi-faceted dimensions of environmental problems and adopt a more holistic approach guided by cross-sectoral strategies.

Part II reviews the main aspects of UNCDF environmental policy and perspectives, and identifies the challenges ahead. Chapter 3 presents the environmental dimensions of the Local Development Programme (LDP), a comprehensive and flexible strategic tool developed by UNCDF to support local development and decentralized planning and finance. A number of lessons may be drawn from previous approaches, such as the need to create local social and institutional conditions that permit the application of technical solutions. For UNCDF environmental issues are not a separate concern, but a horizontal theme that has to be integrated into a comprehensive process of strategic planning and decision-making. In terms of local environmental governance, LDPs combine three distinct but complementary components - institutions, regulatory frameworks and technologies – in order to address the complexity of current environmental issues. Because institutions are crucial assets in the development process, LDPs will strive to help legitimize local institutional stakeholders (local government bodies as well as village associations, user groups, non-governmental organizations and the private sector) within the framework of decentralization policies. They will contribute to give them a legal basis, provide them with the necessary discretionary powers and make them more efficient and accountable stewards of the environment. UNCDF faces the major challenge of supporting the formulation and implementation of local legislative provisions and regulatory frameworks that will promote the devolution of authority and transfer effective responsibilities for natural resource management issues to local authorities and civil society organizations. LDPs will assist local government bodies by providing them with information on technologies and practices that are appropriate to their environment.

Chapter 4 presents the UNCDF institutional perspective, focusing on two distinct but complementary institutional issues: the need for

adequate organizational architecture (institutions/organizations) and sound institutional arrangements (institutions/norms). The general objective of LDPs is to define and implement a coherent, sustainable institutional strategy that will give local governments greater responsibility and provide them with incentives for collective action and operations. In the area of institutions/organizations, LDPs can efficiently contribute to the creation and/or consolidation of formal and informal entities capable of defining, negotiating and implementing coherent environmental initiatives. LDPs will necessarily involve different stakeholders and focus on the processes of change that will define the interactive roles and functions of these institutions. In the area of institutions/norms, LDPs will support the institutionalization of environmental procedures and mechanisms, and promote the incorporation of democratic principles into the regulatory frameworks governing local land systems. This chapter also discusses the component of LDPs concerned with building the capacities of local stakeholders. The basic assumption is that any transfer of powers and resources to decentralized local governments must be accompanied by significant efforts to build local technical and management capacities.

LDPs support the idea that the planning of measures aimed at protecting, rehabilitating and managing natural resources is part of a more comprehensive and coherent system of planning and designing strategies to secure livelihoods and reduce poverty. Chapter 5 focuses on local development planning procedures and the Local Development Fund (LDF), a financial facility intended to support local government investment in rural development and poverty reduction. Local governments can only receive this facility if they meet certain conditions, which include the participatory preparation of coherent, tailored local development plans (that should ideally include a specific section on the environment). Armed with appropriate procedures and mechanisms, and supported by LDPs, local government bodies (at district and/or sub-district levels) with local communities (farmer organizations, user groups, etc.) will be able to plan, finance and directly supervise a series of activities that will better protect, rehabilitate and manage the resource base while increasing its productivity. LDPs either provide local governments with a single financial facility that covers all their investments, or with a parallel environmental fund - a green or environmental window – that specifically addresses issues related to environmental governance

and natural resource management. (The latter option is favoured in the case of particularly degraded ecosystems or fragile natural resources, and/or where local populations are unlikely to prioritize environmental investments due to their poverty and lack of basic social services and infrastructure). LDP environmental planning systems promote bottom-up communication mechanisms that can voice local government and community concerns and influence regional and national policy orientations.

The conclusion highlights UNCDF's total commitment to working towards sustainable livelihoods and lasting progress in poverty reduction. More detailed information on policy and current research findings can be found in the insets, which also provide examples of ongoing UNCDF projects. LDPs support the idea that natural resources can make a significant contribution to sustainable growth when they are properly managed. Interventions related to natural resource management (NRM) will be an essential part of a sustainable process of poverty reduction, since improved productivity will increase rural livelihoods, food security and market participation.

The annexes provide examples of sustainable NRM-related technologies designed to support local economies and reduce poverty. LDPs will support the dissemination of these technologies and facilitate their adoption, provided they are appropriate to poor farming communities, adapted to seasonal labour demand and resistant to risks. The most likely targets for major investment are water supplies and water resource management, watershed management, soil fertility, anti-erosion measures, agricultural intensification, livestock production and health, rangelands, non-agricultural rural activities and forestry, fish farming, eco-tourism and biodiversity.



LANDS OF THE POOR

Part I

Current environmental analysis and debate

1.1 GENERAL BACKGROUND

For the rural poor, productive and renewable natural resources¹ constitute a fundamental source of subsistence, economic growth and social capital. Soils are the foundation of agricultural and livestock rearing activities; water is essential for the survival of humans, livestock and wildlife; and forests protect water sources and provide income.

It is estimated that over 70 per cent of the world's poor live in rural areas, and are therefore heavily dependent on the natural resource base for food production and processing, animal husbandry, fishing, trade, forestry, water and fuel.² Agriculture and pastoralism are seen as major ways of exploiting the natural environment.

Over the last few decades, rural livelihoods have been profoundly affected by a number of ecological, socio-economic, political and institutional factors, which have modified local land tenure systems³ and conditions of popular access to and control over renewable natural resources. The cumulative, combined effects of population growth, stagnant agricultural growth and environmental degradation have created a downward spiral of poverty.⁴ Poor people are the hardest hit by the worsening environmental conditions because of their limited assets,⁵ and poor communities that rely heavily on biodiversity and natural resources for their subsistence and income are increasingly vulnerable, especially in dryland areas prone to recurrent droughts.

As a consequence of this, entire ecosystems in a number of developing countries are now in great jeopardy. Agenda 21 of the United Nations *Conference on Environment and Development* (UNCED) reported that "Expanding human requirements and economic activities are placing ever increasing pressures on land resources, creating competition and conflicts and resulting in suboptimal use of both land and land resources."⁶

1. The endnotes begin on page 137.

The United Nations estimates that some 70 per cent of the 5.2 billion hectares of drylands used for agriculture around the world are already degraded. This has an impact on about 250 million people worldwide. However, the number of people at risk could be as much as four times this figure, given that the global area of arable land per person diminished by as much as 25 per cent over the last quarter of the 20th century.⁷ And this trend could be aggravated by population growth in developing countries: Africa, for instance, is expected to grow from 0.8 billion to 1.8 billion by 2050, and Asia from 3.6 billion to 5.3 billion. Such growth will increase the pressure on and demand for environmental resources.⁸

Growing awareness of the complexity of the environmental problems faced by poor countries has led major multi- and bi-lateral organizations and national governments to adopt new, proactive policies that move away from purely technical approaches aimed at conservation⁹ techniques and stress cross-sectoral strategies. They also highlight the importance of using democratic institutional processes to strengthen the role of local stakeholders¹⁰ and empower them to manage their productive resources in a way that is not only ecologically sustainable, but also consistent with their own priorities and needs, particularly the need to increase agricultural output to meet demand for food.

1.2 UNCDF AND THE ENVIRONMENT

The 'participatory eco-development' approach

UNCDF's commitment to the environment and natural resource management is not new. In the 1990s many of its projects were shaped by an approach known as *participatory eco-development*, or PED, which stressed the linkages between human society and its environment. This approach was developed by UNCDF in response to the growing international consensus that developed following Agenda 21. The aim of UNCDF projects was to address the development constraints faced by people in ecologically fragile and environmentally degraded areas. By giving poor village communities and user groups greater responsibility for the design and implementation of measures to protect and manage productive environments, the aim of PED was to simultaneously restore ecological balance by reversing damage to natural resources, while improving food security and coverage of basic needs.¹¹

In 1997 the overall concept and goals of PED were explained in the UNCDF publication '*Eco-development, People, Power and the Environment*'. This analysed its three intertwined goals: (i) to attain a durable ecological balance (through environmental protection, preservation of soil fertility and the restoration of natural resources); (ii) to promote a sustainable economic dynamic (through food security, income generation and job creation, etc.); and (iii) to attain a durable social and political balance through devolved powers and democratic and participatory decision-making.¹² The overall concept had the potential to pioneer a generation of approaches that emphasize negotiation and critical dialogue between diverse groups of community members and a wide range of actors and institutions.¹³ It provided clear evidence that there is no trade-off between short-term economic interests and long-term resource conservation, and that local village and community institutions are fully able to participate in environmental decision-making and manage sustainable initiatives.

However, an independent evaluation of the entire PED concept identified a number of conceptual shortcomings in this approach, such as an overly homogenous and static notion of 'the community'; insufficient attention to socially differentiated perspectives and priorities; and an inadequate understanding of power relations and conflict. The approach was also limited by gaps in the understanding of ecological paradigms and a tendency to reproduce unsubstantiated views of environmental problems; while it was felt that more effort should be made to identify and involve diverse actors and institutions, and to strengthen dialogue, negotiation and conflict resolution.¹⁴ The approach also understated the limited planning capacity of local communities and their inability to develop environmental plans that could be forwarded to the national government.

Like other, similar participatory approaches to land use planning (such as *gestion des terroirs villageois* or community-based natural resource management), eco-development projects were also limited by the fact that they focused on village communities with clear socio-territorial boundaries, and did not work on a large enough scale to include nomadic pastoralists or fishing communities with wider seasonal movements. Moreover, the entire UNCDF approach was based on the concept of local users 'participating' in different types of environmental measures, challenging the belief then prevalent that they exploited natural resources

irrationally and lacked adequate technical knowledge. Recently it has become clear that the concept needs to be reviewed in light of the democratic processes of decentralization and devolution, and other changes in the social and political environment. Local governments and communities and civil society associations no longer simply 'participate' in local development, but are its 'owners' and 'executors'. They need to be fully empowered and equipped to play a key role in the various aspects of local development - designing, implementing, financing, monitoring and evaluating measures that correspond to their priorities. From this point of view, local stakeholder participation is no longer a desirable goal, but an essential, political component of local development that should be seen in the context of local political processes.

Like other community-based programmes, UNDCF projects were frequently characterized by top-down institutional capacity building, and based on incomplete understanding of the local social dynamics, competing interest groups and larger political and economic structures that spawn local competition and conflict.¹⁵ The transfer of power and financial resources to local governments, freely and democratically elected local authorities and legitimate local institutions also needs to be coherently and comprehensively addressed, and serious consideration given to long-term financial and institutional sustainability. (See Chapter 3 for other lessons learned from PED projects).

The way forward

In 1998 the UNCDF policy paper '*Taking risks*' attempted to devise a more coherent and sustainable institutional strategy for local development, by widening the array of local institutional partners and taking account of new democratic processes. On the specific issue of natural resource management, the paper stressed the importance of investment in the natural resource base, given its potential collective benefits and capacity to generate broader social and environmental externalities. However, it also stressed the importance of linking outputs to participatory local planning rather than predefining them, and of ensuring that managerial responsibilities are shared between local governments, user groups and deconcentrated line ministries.¹⁶

The current UNCDF institutional strategy for local development is presented and analysed in the UNCDF document '*Empowering the Poor*,

Local Governance for Poverty Reduction,¹⁷ which was published in 2003. This argues that by bringing government closer to the people, democratic decentralization not only allows the poor to make their voices heard, but also enables them to fully participate in local decision-making processes. Through democratic processes and good local governance, local governments can make a legitimate and representative contribution to the reduction of local poverty and the sustainable use of environmental resources. UNCDF designed the *Local Development Programme* (LDP) as a comprehensive strategic tool that gives local stakeholders (local authorities as well as local civil society) power and resources in the context of decentralization. The aim of the LDP is to demonstrate that “sound institutional arrangements, together with increased opportunities for better economic performance and sustainable rural livelihoods, may empower the poor, strengthen their participation in local political life and decision-making and improve their conditions”.¹⁸

New challenges

In this paper environmental issues are analysed against the backdrop of the new UNCDF approach to local development. Working towards a more sustainable form of development paradigm, UNCDF has moved away from the direct ‘project type’ instruments previously used to deliver project-by-project support to its eco-development initiatives. This paper stresses the importance of the concept of ‘local environmental governance’ (LEG): the quality, effectiveness and efficiency of environmental stewardship led by local administrations, its transparency and accountability, and the manner in which environmental powers and authority are exercised at the local level. The new environmental approach aims to integrate relevant technical measures (especially those that have proved successful in eco-development projects) into broader institutional frameworks and regulatory measures. It does this by linking local development concerns to broader democratic processes, and by transforming local populations from mere beneficiaries or users of natural resources (or, worse, ‘targets’) into citizens endowed with basic civil rights. Environmental governance is thereafter considered only as a specific aspect of local governance, and natural resource management as part of an overall planning effort aimed at reducing poverty.

However, UNCDF still faces numerous challenges. Among its country partners there is considerable international debate and mixed reaction

to the notion of more precise environmental roles for local governments. LDPs have not yet fully integrated these environmental roles into UNCDF procedures and do not always take full account of environmental concerns; preliminary environment-related assessments are still at an experimental stage; local governments are not fully aware of or able to address environmental issues and LDPs have yet to provide them with a set of sufficient, concrete incentives or methodological tools (such as minimum environmental standards).

This book presents the view from a crossroads. On the one hand, it emphasizes the fact that UNCDF environmental policy should reflect the lessons learned from its previous eco-development projects; and on the other, it stresses the need to better integrate major elements of the present environmental debate into current programming and to build on ongoing social, institutional and political changes. This will not only help UNCDF position itself among other international organizations aiming to reduce poverty in LDCs, but also to attain more concrete directions for future operations and develop precise environmental guidelines for its LDPs.

1.3 MAJOR ECOLOGICAL FACTORS

The poor are particularly affected by the degradation of the renewable natural resource base and loss of biodiversity, not only because they depend on them for their subsistence and income, but also because of the fragility and marginality of their lands. The 2003 World Bank *World Development Report* estimates that about 1.3 billion people live on 'fragile lands' (lands that are prone to wind and water erosion and soil acidification, and subject to soil nutrient leaching) and in remote rural ecosystems (semi-arid areas, mountains and forests). Not only are their numbers growing faster than the populations of more favoured rural areas, but the inhabitants of fragile lands also make up a large proportion of those classified as living in extreme poverty (on less than \$1 a day).¹⁹

Rural populations are increasingly exposed to numerous risks linked to climatic and soil conditions. Their production activities are affected by unstable and unpredictable rainfall, water shortages and depletion, waterlogging, deforestation, soil nutrient depletion, acidification and erosion, declining crop yields, rangeland degradation, fish stock depletion, loss of biodiversity²⁰ and the like.

INSET 1: NEW UNDERSTANDING OF ENVIRONMENTAL PARADIGMS

In recent years, thinking on natural resource management has been marked by a new, more empirical understanding of various ecological parameters and socio-economic issues. This new outlook addresses:

- The real nature, degree and characteristics of ‘desertification’, land degradation and soil loss, and the uncertainty of existing data positing large-scale degradation of natural resources;²¹
- The complex relationships between the poor and the environment, and the limitations of the view suggesting that poor people are forced to degrade landscapes in response to population growth, and economic marginalization;²²
- The population growth argument, which has been a major factor in environmental planning, has been reviewed in the light of more reliable data;²³
- A growing interest in an ‘ecosystem perspective’ that stresses the connections within and between natural systems and the non-living environment;
- Non-static, non-equilibrium perspectives of ecological systems that do not consider change as a linear trend; and the new paradigm in rangeland ecology that stresses the high resilience of vegetation in semi-arid areas;²⁴
- Growing recognition of the efficiency of the ‘common property regimes’ used by collective groups; and of their potential to favour economies of scale and equitable access to resources, and to protect biodiversity;
- The importance of political and social factors in resource use;
- The potential role of customary land tenure systems in providing security of tenure to small-scale producers, thereby encouraging investment in land and the introduction of modern agricultural technology;
- The soundness of certain pastoral practices, such as seasonal herd mobility, which was previously considered environmentally damaging;²⁵
- The importance of class-gender differentials in understanding the impacts of resource degradation.

The natural resource base underpinning agricultural production is threatened. In addition to this, the poor have limited access to fertile land; and, operating in a changing social and institutional context, are unable to generate sufficient income from their small landholdings, which frequently consist of plots scattered across different zones. Loss of biodiversity is undermining agricultural productivity, reducing water quantity and quality and compromising economic benefits.²⁶

What is more, several studies and assessments argue that local ecosystems are becoming less resilient, losing their capacity to absorb change, resist recurrent shocks and recover from crises. This cycle of compounding degradation severely reduces the sustainability of many ecosystems and ultimately generates a downward spiral of poverty.

For centuries the coping and adaptive strategies²⁷ used by the rural poor depended on natural assets.²⁸ In the present situation, these traditional strategies (and related technologies) are not always able to counteract the negative impacts of demographic growth and population pressure on soil fertility, land tenure systems, fuel-wood availability and the like. On-farm soil and water management techniques may increase surface run-off, cause erosion and reduce infiltration of water into the ground. Furthermore, take-up of new technologies aimed at tackling ecological hazards has been slow and/or limited.

The livelihood or land use options available to poor rural populations are limited. When productive natural resources are the sole basis for subsistence and socio-economic development, people must husband these resources to the best of their ability.²⁹ Farmers have attempted to increase or maintain production levels primarily by extending cultivated areas into marginal lands and common property resources (forests, wetlands, bushlands, hillsides) rather than through agricultural intensification. This has had a negative impact on biodiversity, water resources and natural rangelands, as well as on local patterns of resource use.

The creation of wildlife conservation reserves and encroachment of cultivated areas into forests and grazing lands have a profound impact on livestock systems, as this not only limits the availability of rangelands and severely constrains livestock mobility, but also fragments areas previously used for grazing.

1.4 POLITICAL AND INSTITUTIONAL FACTORS

The impact of ecological factors on local livelihoods has been aggravated by concomitant external factors. Along with demographic growth, the combination of the rapid monetization of the rural economy, monopolization of considerable natural resources by a small absentee (usually urban-based) elite and progressive disintegration of communal land tenure systems have aggravated the economic stratification and social inequalities of rural groups, while also modifying land uses and jeopardizing the prerequisites for sustainable natural resource management.

Current debate focuses on the impact on local land use of two major sets of political and institutional factors.

Policy-related factors

- National policies and programmes have consistently aimed to increase growth at the expense of the environment, or to protect the environment without taking account of the basic priorities of the poor.
- The concept of 'land reforms' is a complex construct that aims to: (i) redistribute land (especially in East Asia and a number of Latin American countries); (ii) strengthen tenure and convert customary rights into statutory rights (particularly in Africa); (iii) build the capacity of land institutions. Land redistribution has been heavily politicised, and is frequently the target of political manipulation and cause of conflict.³⁰ Moreover, land titling programmes have proved extremely costly and time-consuming, and do not always take account of flexible 'derived' or 'secondary rights'³¹ as well as primary land ownership rights.
- Land use reforms have also favoured agricultural systems, even where land is predominantly used for other purposes, such as pastoralism.³² The disproportionate interest in cash crops associated with this trend is detrimental to food crops and creates a geographical polarization, as the production of commercial crops (such as cotton and groundnut) inevitably leads to the overexploitation of land resources.³³

- One aspect of land policy neglected by many developing countries is the rights relating to access to and use of common resources (forests, wetlands, rangelands). These are of particular importance to the rural poor, and their disintegration has a major impact on local livelihoods.³⁴
- Major strategies aimed at reducing poverty (Poverty Reduction Strategies, PRSs) have underplayed the importance of environmental and land use issues. They fail to (i) explicitly recognize the poor's dependence on natural resources; (ii) demonstrate the links between poverty and the environment; (iii) explicitly present the legislative, institutional and regulatory innovations needed for poverty reduction through environmental management.³⁵
- The agricultural and environmental policies adopted by governments have been inadequate, and insufficient public funds have been allocated for agriculture. Farming is too highly taxed and government control of agricultural marketing and processing excessive. Furthermore, the use of subsidized prices has often led to inefficient and damaging use of natural resources. In many African countries, government policies intended to regulate export quotas, overvalue exchange rates and enable state market boards to set artificially low prices for agricultural produce are major disincentives to long-term investment in the productivity of resources;³⁶
- Financial resources for agriculture are insufficient, and the incentive systems and institutional settings for investment in rural areas inappropriate.
- Credit and fertilizer subsidies were eliminated and distribution switched from the state to the private sector as a direct consequence of structural adjustment policies. This led to a general reduction in the use of fertilizers and a sharp decline in public investment in the environment and agricultural sectors.
- Most national policies have consistently marginalized dry areas in terms of services (health, education, drinking water), infrastructure and budgetary allocations; while investment in dryland areas often targets large-scale projects such as irrigation works, mining activities and other initiatives that bring few benefits to local people.³⁷

Institutional factors

- In most developing countries environmental decision-making is a highly compartmentalized process undertaken by several ministries. In West Africa, for example, two or three ministries are usually involved in environmental issues.³⁸ Any form of integrated environmental planning and management is hindered by the fact that national governments are organized along traditional sectoral lines. For instance, plans to build roads and dams or extend irrigated agriculture take no account of rangelands and forests, while plans to conserve the environment or create national parks and protect wildlife ignore the immediate subsistence needs of local resource users. Environmental ministries are often isolated from other ministries that may affect the environment, and separate environmental units are seldom strong enough to influence decisions that could have a significant impact on the environment.³⁹
- Technical departments are reluctant to transfer significant powers to elected local governments, particularly powers over environmental planning. Even in countries with a solid history of decentralization, strong autonomous local governments and highly developed economies, central government is usually seen as the key level for successful environmental policies.⁴⁰ Awareness of the comparative advantages of local government, particularly in terms of allocative and productive⁴¹ efficiency, has little influence on national environmental policies. Traditional environmental governance is still based on top-down approaches primarily aimed at preventing environmentally 'harmful activities' by local users. Decisions about ecosystems and natural resources are centralized, and decision-making managed by people lacking experience of local conditions who take no account of local knowledge and know-how.
- Agricultural marketing institutions, particularly parastatals, neither serve farmers efficiently nor provide sufficient public investment in fragile lands.⁴²
- Rural financial systems are unable to stimulate and capture agricultural savings and channel them into agricultural investment;

- In most developing countries local civil society organizations in rural areas are weak, and there are no environmental interest groups capable of persuading the government to implement environmental policies.⁴³

1.5 ISSUES RELATED TO LAWS AND REGULATORY FRAMEWORKS

In current complex political and economic settings, land tenure has increasingly become the point of convergence for two principal objectives: the economic goal of making land profitable, and the political goal of gaining control over social groups.⁴⁴ The legal and legislative frameworks (land use policies and land reforms) asserting the pre-eminence of the central State over land and its resources as the only way of ensuring sustainable management have particularly affected rural populations, discouraging users from actively protecting their resources, and destabilizing existing land use systems.

In many cases these land use policies have led to a process that not only gives state authorities a pre-eminent role in resource management and frequently replaces locally regulated common property regimes with a *de facto* system of open access,⁴⁵ but also severely reduces the land security of local communities. This is detrimental to both local communities and central governments. The former lose the right to traditional means of regulating land management and use, while the latter can no longer rely on traditional customs to help enforce resource management through mutually advantageous arrangements.⁴⁶ What is more, it leads to overgrazing and reduces the quality of natural vegetation.

These legal frameworks have consistently ignored, undermined and/or delegitimized local people's rights over land resources.⁴⁷ Until very recently, many governments and external aid agencies explicitly considered traditional land tenure systems as inadequate and unfavourable to the introduction of modern farming technologies and market-oriented agriculture.⁴⁸ In many African countries customary land rights remained outside the realm of the law because they were not recognized by the State, even when most land was governed by customary tenure arrangements.⁴⁹ In some countries, such as Tanzania, the State and other investors continue to ignore rural peoples' rights to their natural resources despite legislative recognition of customary land rights.⁵⁰

The current environmental debate emphasizes the importance of issues

related to land ownership and the need to ask 'Who gets what, in what way and under what circumstances?'⁵¹ It also stresses the complex relationships between macroeconomic policy, structural reforms and the environment. Some claim that reforms that alter relative prices and economic growth may also affect the environment (by encouraging unsustainable resource use, for instance). Markets for environmental goods or services often perform poorly or do not function at all,⁵² while producers who are almost entirely dependent on the use of natural resources may also suffer directly or indirectly from the liberalization of trade and introduction of cheap agricultural imports.

Although they claim that state property rights over land are crucial, central state authorities rarely have the means or capacity to manage natural resources. This is largely due to a lack of conceptual and strategic frameworks, poor control mechanisms and absence of neutrality vis-à-vis local stakeholders.⁵³ Official policies generally fail to provide effective forms of environmental protection and stewardship, while the government mandate to manage and control land far outstrips its institutional and logistical capacity.⁵⁴

The principle that land insecurity has a negative impact on agricultural productivity is gaining credence, although its exact meaning and implications are not always clear. It has also been pointed out that land security refers not only to private land ownership, but also to a wide range of customary tenurial institutions and land use arrangements, including leasehold tenure through fixed rent tenancies, crop-sharing agreements, pledging (payment in the form of a loan) and the like.⁵⁵

Insecure rights inhibit investment in land improvements and prevent the realization of economic and non-economic benefits, such as greater investment incentives, transferability of land, improved access to credit markets, more sustainable resource management and independence from the discretionary interference by bureaucrats normally associated with secure property rights to land.⁵⁶ In the livestock sector, land insecurity has discouraged producers from investing in infrastructures (wells, dams, etc.) and range management improvement activities (water conservation and agro-forestry).⁵⁷

Insecurity of land tenure among rural women is one of the most important (but under-documented) obstacles to increasing the productivity of natural resources. Rural women are particularly affected by environ-

mental degradation. Their land rights are seldom acknowledged by either customary or modern regulations, and their rights rarely correspond to their environmental responsibilities and technical know-how. Furthermore, women are often prevented from making management decisions regarding the use of land-based resources, either for their immediate household needs or for long-term sustainable investment.

1.6 RELATIONS BETWEEN RURAL POVERTY AND THE RESOURCE BASE

In rural areas, where the environment supports basic human needs and people are heavily reliant on natural resource-based production systems, resource management is critical for local development and poverty reduction. As the World Bank *World Development Report 2003* states: “For people to thrive, assets must thrive. A broad portfolio of assets—physical, financial, human, social, and environmental—needs to be managed responsibly if development is to be sustainable —because of thresholds and complementarities among assets.”⁵⁸

Entrenched poverty seems to be particularly difficult to reverse, and many areas are subject to factors that trigger widespread impoverishment. Land - particularly fertile land – is an increasingly rare commodity that is subject to privatization, accumulation by a minority and commercial speculation. Control over land resources is becoming a major economic issue, since it is a key condition for the functioning of local production systems and the material and social reproduction of farming societies.⁵⁹ This inevitably leads to unsustainable patterns of natural resource use and management, which result in the poor being forced onto fragile lands that are more prone to degradation.

Lack of assets and capital are reflected in the low use of fertilizers, machinery and other agricultural technologies; limited physical infrastructure; inadequate education and health; and general degradation and diminution of the resource base.

Socio-economic research conducted over the last few decades clearly shows that in ecological and economic crises the poor tend to undermine the capital base of their production system through divestment (sale of land and livestock), diverting it towards consumption. Also, that resource degradation forces the poor onto fragile and/or vulnerable lands, such as food-plains and drought-prone areas; and that large

domestic groups tend to split into smaller family units, diminishing traditional networks of solidarity and mutual assistance, which are increasingly replaced by other, more individualistic and commercially oriented mechanisms.

In politically marginalized rural areas the poor have little opportunity to influence government policies and strategies. Nomadic pastoralists in remote areas lack political and economic influence, since their pastoral systems are seen as expendable by decision-makers who often choose to reallocate pastoral lands on the basis of different (non-pastoral) priorities. The condition of the rural poor may also be worsened by social norms, the centralization of power and distribution patterns that may, for example, exclude minority groups and women from land rights and decision-making on environmental issues. Finally, the absence of credit and insurance institutions in poor rural areas fosters uncertainty and vulnerability.

Development initiatives intended to raise agricultural productivity and reduce resource degradation rarely address the specific needs of the poor; while some aspects of the decentralization process may even increase the power of local elites at the expense of the poor majority.

Finally, while the diversification of economic activities may be important for meeting short-term needs, steering the poor away from agriculture could threaten local agrarian practices and family values. As the *Human Development Report 2003* states: "Today, the strong links between poverty and the environment call for a focus on the needs of people whose livelihoods depend on natural resources and environmental services".⁶⁰

1.7 Land-related conflicts

The struggle for access to and use of natural resources has become a widespread and crucial survival issue. The scope and gravity of current and latent conflicts over how the resource base should be used, and by whom, contribute significantly to the weakening of rural economies and threaten local ecological dynamics. It has been argued that land shortages engender three types of competition for land use: competition over land for crops and pasture; competition over cultivable land between residents and immigrants; and competition over pastures for village livestock and transhumant livestock.⁶¹

This situation can be explained by the increasing poverty and social inequalities in rural areas, degraded and declining resources, the spread of cultivated farm crops to the detriment of forests and grazing lands, and the variable productivity of resources; as well as the erosion of the customary laws and regulatory frameworks regulating land use.

Conflicts may also be caused by local patterns of resource use, which typically involve complex combinations of different, variable uses of the same resource (e.g. land for food, cash crops, pasture or hunting-gathering activities), the co-existence of users with different status (such as local residents and immigrants), differentials between the productivity of resources and different sets of rights.⁶²

Finally, current conflicts can also be explained by the confrontational co-existence of several land tenure systems, which may be customary, Islamic, modern or a combination of various regimes.

The consequences of these conflicts are all the more dramatic because the role and status of customary leaders has changed profoundly over time. In many African countries, traditional leaders used to play a major role in natural resource management and land use. Nowadays, in Zimbabwe, for example,⁶³ individual chiefs, headmen or *kraal*-heads are influential at the local level, but are unable to influence central government policy as an interest group. However, it is difficult to generalize, since some traditional leaders want to work with local governments, while others are interested in maintaining or regaining control over natural resource management and land distribution, and want to reduce the power of local authorities.

1.8 OVERVIEW AND CONCLUSION

Because of their dependence on diminishing natural resources, the livelihoods of the rural poor are threatened by a cycle of impoverishment and their social fabric and security undermined and jeopardized by collapsing eco-systems.⁶⁴ Declining agricultural productivity is both the cause and consequence of the deterioration of the natural resource base on which agriculture depends.⁶⁵

Major ecological, political and institutional factors have contributed to worsening environmental conditions, changes in the conditions of local people's access to and use of renewable productive natural resources, and the increasing vulnerability of the poor. In the words of a nomadic

pastoralist from Niger: “In the past, all our wounds could be healed. Today, all our scratches become a gaping sore”.

While the degradation of the natural resource base has a substantial impact on the economies of developing countries and directly threatens their quality of life,⁶⁶ the deteriorating land and water base of many regions is a cause for global concern, and conservation has become a matter of urgency as awareness of environmental issues has grown.

The *2000 Millennium Summit* reaffirmed the need for more holistic development strategies in which environmental management is an integral component of efforts to reduce poverty and achieve sustainable and equitable growth. Sustainable natural resource management must return to the top of the development agenda if we are to achieve the Millennium Development Goal (MDG) of cutting hunger and poverty. One of the major objectives of poverty reduction is to improve the productivity of assets used in agriculture (labour, soil, water, livestock and vegetation), and social and environmental concerns should be integrated to improve the well-being of populations.

By highlighting the environmental role of local communities, user groups and governments in decision-making, the ‘local environmental governance’ paradigm supports the opinion that the environment must be used in a manner that is ecologically sustainable, responsive to the needs of the poor and in accordance with local values and culture.

Current understanding of new environmental paradigms and the ‘poverty–environment’ nexus has yet to be fully translated into appropriate policies. There is an urgent need to define institutional and regulatory frameworks that enable the poor to participate in environmental decision-making, secure their rights, and allow them to use sustainable natural resource management practices and techniques. Environmental governance is about decisions regarding natural resources and ecosystems, ways of using these resources, the exercise of environmental powers and stewardship, and the manner in which decisions are made. Therefore, we need to ask how decisions about the environment are made and who participates in making these decisions.⁶⁷

CHAPTER 2 Current cross-cutting issues and environmental policies

2.1 INTRODUCTION

The previous chapter attempted to synthesize key elements of current analysis of environmental issues and the relationship between poverty and the environment.

This chapter focuses on a number of cross-cutting themes and issues – such as governance, institutions, broader perspectives, technical agenda and land security – that inform current debates on the sustainable use and management of natural resources, as well as the environmental approach adopted by major international funding agencies and governments of developing countries.

2.2 FOCUSING ON GOVERNANCE AND DECENTRALIZATION

Over the last decade there has been increasing recognition that many environmental problems are grounded in institutional failure and poor governance,⁶⁸ and that decentralized and democratic governance is a pre-requisite for sustainable development and poverty reduction.⁶⁹ The *New Partnership for Africa's Development* (NEPAD) initiative cites poor political and economic governance as two of the root causes of much of the malaise afflicting Africa: they create general political and economic uncertainty, an unpredictable business environment, political unrest and sometimes even war, which all inhibit economic growth. Poor governance also creates an environment inimical to efficient investment in human and material resources, and undermines the formulation and implementation of policies and laws that could accelerate the process of economic growth and development.⁷⁰

The good governance agenda, which aims to ensure quality, effectiveness and efficiency in local administration and public service, emphasizes the importance of 'bringing the State closer to the people', and of providing the opportunity and scope for greater local participation. The 'democratic governance' option is seen as a pre-condition for poverty

reduction strategies for sustainable development, and is now an integral part of approaches to local development, providing the basic rationale for donor support of decentralization reforms.⁷¹

From a wider perspective, it is argued that decentralization (and democratic governance) is of great interest to environmentalists because it can reshape the institutional infrastructure on which future local natural resource management will depend; while the use and management of natural resources are of interest to those advocating decentralization and local democracy because they are sources of revenue and power, and therefore of potential legitimacy for new local government authorities.⁷²

Environmental governance (see Inset 2) is about how societies deal with environmental problems; the interactions between formal and informal institutions and actors in society, and their influence on the identification and framing (or definition) of environmental problems; and the ways in which environmental issues reach the political agenda, policies are formulated and programmes implemented,⁷³ at both global and local levels.

By analysing the different levels of governance mechanisms and understanding the links between them, environmental governance aims to provide a general framework that different actors at each level can use to improve their skills in environmental management. The concept includes the principle of devolving resource management to local NGOs and community organizations, and challenges the orthodoxy of environmental conservation that exclusively favours land privatization. Through the devolution of environmental powers to local stakeholders, local environmental governance is also supposed to be socially redistributive and environmentally benign.

Thus, as an integral part of the wider notion of 'local governance' or 'democratic governance', the concept of local environmental governance defines the capacity of local stakeholders (particularly freely elected authorities) to manage local people's relationships with their physical environment in accordance with the principles of participation, transparency, efficiency, equity and accountability. This is in opposition to previous models of environmental governance based on the process of 'statization' (the State asserting its property rights and control over resources). The key elements of this concept are that:

INSET 2: GOVERNANCE AND NEW ENVIRONMENTAL CONCEPTS**International and Global Environmental Governance (GEG)**

The aim of GEG is to strengthen environmental policymaking at international levels by addressing the role, structure, functioning, financing and activities of the environmental regime. These two concepts combine elements of social theory, geography, environment, international relations, anthropology, environmental ethics, epistemology, economics and history.⁷⁵ The emphasis on global governance stems from recognition of the fact that many environmental problems are of a trans-boundary nature, and that strong and effective international institutions are needed to address them.⁷⁶ The underlying theory “derives from the notion that there exist serious problems of failed collective action, fragmentation, deficient authority, and insufficient legitimacy that riddle the current institutional architecture”.⁷⁷

Eco-governance

The relatively new concept of Eco-governance is used to determine relationships between human activities and environmental viability, particularly where there is a conflict of interests. It provides options for incorporating environmental provisions into national policy: outlining policy, legal and institutional measures for resolving conflicts between local people and the State over natural resources; and environmental laws and policies to assess the adequacy of existing policies and laws in a number of countries, etc.⁷⁸

Local environmental governance (LEG)

As a political concept embedded in larger governance concerns, the concept of LEG stresses the crucial role of local civil society in environmental issues and the vital contribution that local governments can make because of their proximity to citizens. This concept emphasizes the idea that the most sustainable development initiatives occur at the local level, and that local governance structures must be strengthened in order to adequately address sustainability issues. It also implies that environmental degradation, underdevelopment, poverty and famine are the result of decisions and systems (which are often political in nature) regarding the distribution of resource wealth and relevant citizen rights.⁷⁹

- Sustainable development initiatives occur at the local level;
- Good governance is based on the identification of individuals and institutions that should be empowered to make decisions about natural resources and their management;
- Local governance structures must be strengthened in order to fully assume environmental roles;
- Communities should not only share the benefits arising from the use of natural resources, but also participate in decisions regarding their management;
- Local stakeholders need to be individually and collectively empowered in order to adequately address sustainability issues.

2.2.1 Empowering grass-roots user groups

In the context of decentralization reforms, many developing countries have adopted national policies and laws explicitly stating that communities should be directly involved in environmental management (see examples in Inset 3). Such reforms and new legal instruments have a direct effect on which individuals and institutions will be empowered to decide on the use and management of natural resources,⁸⁰ and are intended to enable local communities to participate in the conservation of natural resources while benefiting economically from their use.

The general principles behind this approach are that the persons or groups most likely to suffer from the misuse of natural resources are those with the greatest incentive to use resource rights to prevent environmental damage,⁸¹ and that community organizations can establish effective access rules and mechanisms for monitoring and enforcing the cooperative management of forests, land, livestock or water.⁸²

A study on the implementation of natural resource management in Zimbabwe pointed out that local authorities may play many roles in improving governance at district level: by facilitating the preparation of by-laws by village administrations and endorsing their status as legal instruments; by coordinating different technical departments (such as National Parks) and liaising with central government; and by managing projects that are outside the competence of village administrations (commissioning feasibility studies and consultancies, tendering, con-

tracting and financially managing local projects).⁸³ In 1999, countries in the Southern Africa Development Community (SADC) defined a *Protocol on Wildlife Conservation and Law Enforcement*, which asserted that state parties should establish or introduce mechanisms for community-based wildlife management and integrate principles and techniques derived from indigenous knowledge systems into national wildlife management and law enforcement policies and procedures. This protocol defines community-based wildlife management as the management of wildlife by a community or group of communities that have the right to manage wildlife and benefit from doing so.⁸⁴

The international community is also increasingly accepting the principle of the devolution of rights to local natural resource users. For example, a recent World Bank report recognizes that “the highly centralized institutional structure that characterizes many government administration systems can lead to losses in effectiveness of development investments and policies”.⁸⁹ Only good governance and appropriate local institutions are likely to support sustainable development.

2.2.2 Defining the competencies of (sub) district councils

In many developing countries consistent legal efforts are favouring the definition of new environmental roles for local governments and communities. With decentralization, various environmental powers have been devolved to local governments, such as the power to formulate by-laws regulating resource access and use (e.g. permits for timber harvesting or grazing) or to control certain state or urban lands.

In Uganda, the 1993 *Local Governments Statute* devolved a series of central government powers to elected local authorities. The new 1995 *Constitution* subsequently transferred further functions and powers “to democratically elected councils”, and the 1997 *Local Government Act* empowered district and city councils (and lower-level local governments) to pass by-laws without reference to or permission from central government, provided they do not conflict with the national constitution or other laws. This new legal context implies that local governments, not executive or traditional rulers, should have the power to formulate environmental by-laws that take account of the needs of local people. The *Local Government Act* specifically states that district councils are responsible for helping the government preserve the environment by

INSET 3: EMPOWERING USERS: EXAMPLES FROM NATIONAL LEGAL FRAMEWORKS

In Nepal, the 1957 Private Forest Nationalization Act stated that all forestland and trees planted on private lands were owned by the government. The insecurity engendered by this Act, particularly with regard to people's rights to use trees, led to the degradation of forests. The government soon realized that forests cannot be managed and conserved without the active participation of local communities, and passed the Forest Act of 1961, amending it in 1978 to incorporate provisions for community forestry (Panchayat Forest and Panchayat Protected Forest Rules). Local forest user groups in Nepal were further empowered by the 1989 Master Plan for the Forestry Sector, the Forest Act of 1993 and the Forest Rules of 1995, which permitted them to sell forest products and raise funds by obtaining grants/donations or through income generating activities. Today, the community forest group is recognized as a social institution, a legal entity and a self-governing, autonomous body with rights to formulate its constitution, make decisions regarding forest management and set the price of forest commodities.⁸⁵ The New Forest Bill clearly acknowledges the rights of user groups to manage and protect forest areas.

In 1997 Mozambique also embarked upon a process of creating space and opportunities for community participation, adopting a Policy and Strategy for Wildlife and Forestry Development. The Wildlife and Forestry Policy states that the people that use and directly benefit from wildlife should participate in management planning processes, thereby identifying local communities as the principal actors in policy implementation. The essential principles for wildlife and forestry management include: conservation of basic resources and biological diversity; involving those who depend on forestry and wildlife resources in the planning and sustainable use of these resources; and establishing measures to ensure that communities benefit from wildlife resources. Similarly, the Wildlife and Forestry Law (1999) calls for integrated natural resource management that ensures effective participation by local communities, associations and the private sector.

In Madagascar, the 1996 GELOSE (*Gestion Locale Sécurisée des ressources naturelles renouvelables*) legislation established the framework for decentralized resource management, with the aim of giving local communities (*communautés de base, CDBs*) environmental powers over the resources in their territories. This implies the transfer of management responsibilities for the protection and use of resources, not a transfer of property. The agreement, which was signed by the community, local authorities and line department concerned, includes a Land Security Act that provides the community with basic but temporary land guarantees (*sécurisation foncière relative*). This agreement can only be renewed if CDBs meet certain requirements and have implemented planned measures.⁸⁶ Moving beyond a participatory approach to conservation, GELOSE focuses on a contractual approach whereby local communities gain the rights and responsibilities for local resource management through formal legal contracts with the national government and other stakeholders.⁸⁷

Finally, in Malawi, the Environment Support Programme (ESP) of the Ministry of Research and Environmental Affairs envisages a gradual transfer of natural resource management from the government to local communities. The ESP aims to establish a micro-project fund and create Village Natural Resource Committees (VNRC) responsible for the preparation of resource management plans, which will be funded through the micro-project fund.⁸⁸

protecting forests, wetlands, lake shores and streams, and preventing environmental degradation. District authorities are allowed to appoint 'district environmental officers' to advise district environmental committees and assist local environmental committees.⁹⁰

Tanzanian decentralization policy, enacted through the 1997 *Regional Administration Act* and the *Local Government Reform Programme*, transferred responsibility for the management of funds and personnel from central government to district councils; while government policies published between 1995 and 1998 and amendments to Local Government Acts emphasized the need for local communities to participate in environmental management. The *Local Government Reform Programme* stresses the need for a devolved framework for environmental management. Two separate *Land Acts* passed in 1999 attempted to regulate land allocation by the State and through sales on the open market. Despite certain ambiguities, these Land Acts stand out from other new African land laws because they transfer control over the administration of land tenure to the grass-roots level, and provide opportunities for community empowerment and capacity building that will make village governments and District Councils more accountable to villagers.⁹¹ Similarly, in Senegal, a high degree of decentralization gives local elected authorities (Rural Councils) specific environmental roles and powers. Acting as an interface between the territorial administrative hierarchy and local users, Rural Councils theoretically enjoy considerable authority over local resources, as they are responsible for the allocation of use rights, land planning, regulations concerning local markets, cattle walks (or livestock corridors) and residential zoning patterns.⁹² Finally, in Mali, the new *Code Domaniale* identifies public lands that can be transferred from the Forestry Department to the new rural *communes* (local authorities), and allows rural *communes* to delegate natural resource management to other organizations, such as villages or co-operatives, through local conventions or agreements.⁹³

All these efforts are ultimately intended to enhance security of tenure, improve productivity and encourage better land conservation practices. They also aim to give local communities the means and incentives to improve their land and intensify production.⁹⁴

2.2.3 *Recognizing the importance of customary institutions and rights*

A third dimension of contemporary reforms and bills is the importance given to customary institutions and rights in the use and management of land. In a parallel way, current development thinking stresses the fact that indigenous tenure systems embody significant social values that are crucial for effective natural resource management.⁹⁵ Recent research has confirmed the durability and flexibility of customary rights and systems, and disproved the assumption that ‘customary’ land management systems preclude the emergence of market relations, pointing out that they have to be balanced with broader sets of interests and objectives. For example, customary criteria regarding claims over land may be tempered by broader concerns linked to citizenship and equity.⁹⁶ Attempts in countries such as Kenya to replace customary tenure with registration and titling were only partially successful: customary rights proved more robust for everyday transactions, while individual titles fail to capture the range of multiple use rights to arable, grazing and forest land that are fundamental to local livelihoods.⁹⁷

In Mozambique the State no longer sees itself as the sole provider of goods and services, and fully recognizes the role played by local actors in both political and economic spheres. As a result, it has approved many policies affecting the use of natural resources in order to guide sustainable development in the country. These policies have been translated into provisions that recognize customary rights of occupation (over 10 years); certificate community land rights (group tenure); acknowledge customary rights and roles in land management; endorse community-based natural resource management as a strategy for allowing communities access to resources like timber and non-timber forest products in order to generate income; and legal recognition of local institutions to safeguard these rights.⁹⁸

In Burkina Faso, Edict 84-050 of August 1984 (concerning the agrarian and land use reform, the *réforme agraire et foncière*, or RAF) permitted the definition of a policy aimed at empowering village communities and promoting local development and local natural resource management. Through their integration into the legal, administrative and economic framework that supports rural development, customary rural institutions can play a key role as partners in rural development, rather than ‘targets’. The special status accorded by the RAF to land use committees representing individual villages and several inter-related villages (respec-

tively, the *Commissions Villageoises de Gestion des Terroirs*, or CVGTs, and *Commissions Inter-Villageoises de Gestion des Terroirs*, or CIVGTs) paved the way for decentralized local government structures. This policy was confirmed by another piece of legislation passed in 2002, which established the conditions for the creation of CVGTs and CIVGTs as well as their role and procedures. More particularly, their mandate includes the formulation of local development and land use plans, and management of community infrastructures, forests, grazing areas and natural resources.

Niger has undertaken two major political reforms since 1986 (a land tenure reform and a *Rural Code*), with the objective of increasing land security for the rural population. In addition to giving rural producers greater security of tenure, the aim of the Rural Code is to organize and manage rural areas, promote better natural resource management and conservation practices, and help plan and manage natural resource use across the country. The Rural Code is highly innovative in that it acknowledges the tenure arrangements for both cultivated lands (*mise en valeur agricole*) and grazing lands, as well as the legal implications of measures taken by pastoralists to make optimal use of pastoral resources like pasture, water and livestock (*mise en valeur pastorale*). Three structures were created as part of the process of formulating the Rural Code: the National Rural Code Committee, the Permanent Secretariat for the Rural Code and the Tenure Commissions (*commissions foncières*). The role of the Tenure Commissions is to recognize customary tenure rights at different institutional levels, and to transform rural concessions into ownership rights. They also assess the strength of rights claimed by litigants and determine the amount to be paid for eventual indemnity. Tenure Commissions are endowed with the general power to control the development of sub-district lands, and can transfer use of this land to a third party if they judge that the land has not been developed.⁹⁹

Thus, tenure reforms in many African countries have attempted to formally recognize customary rights and systems, particularly since the mid-1990s. In the context of decentralization, customary leaders are increasingly participating (or being urged to participate) with decentralized bodies in the management of land resources and conflicts over land.

2.2.4 Mixed results of programme implementation

Despite the favourable legal environment, the devolution of environmental management responsibilities to local authorities and communi-

ties has produced mixed results. Decentralization and local empowerment do not automatically result in sound environmental stewardship or environmentally responsive and accountable local governments.¹⁰⁰

Insufficient delegation of environmental responsibilities

Many countries have yet to finalize a set of policy, legal and regulatory reforms aimed at improving poor people's access to and control over environmental assets, and strengthening their effective participation in environmental planning and management.¹⁰¹ For instance, although Mozambique has laws supporting the delegation of environmental powers to local authorities and communities, the government generally retains the power to make financial decisions and determine the commercial use of natural resources, as well as the authority to sanction choices made at community level (through approval and other mechanisms).¹⁰² Mozambique is not unique in this, as central governments and environmental ministries in many countries have proved very unwilling to delegate environmental responsibilities. Their reluctance seems to be mainly related to financial considerations (fear of losing the economic benefits derived from use of these resources), although it may also reflect more or less legitimate concerns about the capacity of local governments and communities to deal with environmental issues, standards and technologies.

In Zimbabwe, the success of the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) is largely due to the fact that it is implemented in the context of decentralized management. Rural District Councils (RDCs) have been given Appropriate Authority status, and CAMPFIRE committees been established at village, ward, district and national levels.¹⁰³ However, this initiative does have major shortcomings, mainly because the rigid programme conditions imposed by the Department of National Parks and Wildlife Management (DNPWM), which conceived CAMPFIRE, do not allow local District Councils or local communities to have effective control over wildlife management.¹⁰⁴

The impact of the innovative GELOSE legal framework in Madagascar has also been limited. This is partly due to the late publication of basic legal texts and ongoing delays in the publication of various documents explaining essential procedures, and partly to the fact that farmers believe GELOSE is too complex, entailing lengthy and cumber-

some procedures. Another, simpler option is the Participatory Forest Management system (*Gestion Participative des Forêts*, GFP), although this does not provide sufficient guarantees and is supervised by forest department officials, without involving local authorities.¹⁰⁵ In Uganda, despite the results achieved since the launch of decentralization reforms, the restricted powers devolved to local governments have limited their contribution to positive environmental change. Since forestry officials operating at local government level are employed by the central government, they are upwardly accountable and wield both technical and political power. Additional constraints include an inadequate and sometimes unstable policy framework, lack of resources and conflicts of interest between the various groups involved.¹⁰⁶

Even the system of *Land Boards* in Botswana has its weaknesses. This, the only system of its kind in southern Africa, was created in 1968 with the *Tribal Land Act* to replace traditional chiefs as the main administrators of rural land. Its creation was seen as a necessary step towards the modernization of rural and urban land tenure and the democratization of land administration. The core functions of the land boards include the allocation and administration of tribal lands (which cover about 71 per cent of the country), issuing certificates and leases, arbitrating disputes and recording minutes of various meetings, as well as settling disputes over land. They are also responsible for land surveys and registration, providing professional and technical advice on land use planning and surveying), land and plot demarcation, assessments and valuations, borehole investigations and beacon identification. However, in their present form land boards are not fully democratic structures because their members are not elected by registered voters in their constituency, and are therefore not accountable to the electorate, unlike the District Councils.¹⁰⁷ A similar situation exists with the Tenure Commissions (*commission foncières*) in Niger (see Inset 7 in Chapter 4).

Although the governing policy for national environmental management in Tanzania is well formulated, local-level mechanisms and actions plans are poorly implemented.¹⁰⁸ Policy documents state that the government holds natural resources in 'trust', but the fact that the law does not specify what this means paves the way for 'trust' to be translated into 'ownership'.¹⁰⁹ In the event, central government has failed to relinquish control over decision-making powers and ownership of natural resources, since the various institutions it created to manage natural resources

were given police powers and made directly responsible to the minister of a relevant ministry.¹¹⁰ Malawi has neither adequate policies regarding the management and use of forests and forest resources by local village groups, nor a structured framework within which to operate and ensure reasonable consistency in the extension approaches, messages and incentives proffered by projects, institutions and NGOs.¹¹¹

A major problem is that the democratic governance agenda is all too often seen (particularly by donors) as a political option that will quickly remedy the failures of past programmes and projects. Many governments formulate (and have even adopted) policies intended to devolve responsibility for natural resource management to local authorities on the simplistic assumption that decentralization will automatically improve environmental governance. However, the transfer of significant responsibilities for territorial and natural resource management to elected municipal councils does not necessarily include control over income-generating aspects of natural resource management, as Nicaraguan councillors discovered.¹¹²

Insufficient incentives to local user groups

In general, laws do not contain specific provisions to address the balance between conservation strategies and effective community development, and consequently tend to favour the former. An analysis of community-based programmes in Zambia, Kenya and Zimbabwe found that they provided few incentives to local communities because they gave them little authority over wildlife. Local people remain disenfranchised from wildlife resources because wildlife is ultimately owned by the State, whose agencies control access to animals through paramilitary scouts (nearly all important decisions about revenues and quotas are made by government personnel).¹¹³ In Zimbabwe, the CAMPFIRE approach has had mixed results, mainly because it does not generate sufficient revenue to compensate people for the damage to crops caused by wildlife; and also because the council frequently fails to redistribute the required 50 per cent of CAMPFIRE revenue to communities, partly because of high administration costs, and partly because CAMPFIRE revenue is used for other activities.¹¹⁴

In Nepal, the quality of the legal texts granting certain areas of degraded forest or deforested land to local *panchayat* (under an official

management plan for the protection and utilization of forest products) failed to counteract various shortcomings in the arrangement. It was claimed that (i) a narrow approach was taken with regard to conservation, emphasizing tree maintenance and planting; (ii) forest management had a very restricted purpose: preventing access to forests by local people, and maintaining and increasing the stock of trees; (iii) participation was only requested for land development and plantation; (iv) little or no attention was given to the forest needs of local inhabitants in areas around national parks and wildlife reserves.¹¹⁵

Finally, it has been pointed out that current legal efforts to give local stakeholders a new role frequently fail to provide either genuine protection for community-based management or sufficient 'legal space' in which local people can make real choices.¹¹⁶

2.2.5 Challenges

Decentralization reforms have many challenges to overcome if they are to enable local governments and communities to fulfil their crucial role in promoting environmentally sustainable local livelihoods and well-being. While the general principle of the allocative efficiency of local governments (both in terms of quantitative and qualitative responsiveness to local needs and priorities)¹¹⁷ is widely recognized, there is still debate about the controversial argument that the devolution of decentralized functions to local governments should be accompanied by political, administrative and financial authority, along with effective channels of local accountability and central oversight.¹¹⁸

It is increasingly recognized that local governments have comparative advantages in:

- Making environmental decisions that are more in tune with the needs and priorities of local populations (for example, by stressing poor communities' strategies for minimizing risks rather than those aimed at maximizing benefits), and defining local by-laws and regulatory frameworks on environmental issues;
- Bridging the gap between central governments and local rural communities caused by a long history of mistrust and suspicion, unfulfilled promises and failed rural projects;

- Promoting the mobilization of all local stakeholders (civil society associations, traditional leaders, user groups, agricultural co-operatives, the private sector) around local environmental priorities;
- Helping secure the land rights of local individuals and groups by registering or providing titles to the land they use, keeping cadastral registers, or formalizing and enforcing rules regulating access to and use of local common property resources;
- Making information on environmental issues accessible to local communities, user groups and their representatives;
- Providing central government and line ministries with essential information about local conditions; helping formulate and implement necessary land reforms; securing local land rights in an equitable manner, including those of minority and marginal groups; helping design capacity building programmes for local stakeholders; establishing concrete incentives for staff from deconcentrated services posted in remote rural areas;
- Providing central government and line ministries with information about local environmental priorities, and preparing comprehensive management plans for large eco-systems spanning many jurisdictions;
- Supporting legitimate and necessary deconcentration, whereby important environment-related functions are transferred to local branches of ministries for the environment, water, forests, wildlife and the like.

Local governments may thus constitute new ‘laboratories’ for popular participation in environmental decision-making and pro-poor use of natural resources. What needs to be done now is to launch a number of ‘demonstration projects’ that would, according to a UNDP paper on the environment, lead to “enhanced protection of the poor’s rights of ownership and access to environmental assets”, and build the capacities of ‘key stakeholders from government, NGOs, local communities and the private sector’ in “planning, negotiating and implementing collaborative and integrated environmental management approaches”.¹¹⁹

NEPAD specifically aims to promote agricultural-led development that eliminates hunger and reduces poverty and food insecurity, thereby opening the way for increased exports. NEPAD's vision is that the economic growth of the continent will increase through an overall strategy of sustainable development and preservation of the natural resource base. By 2015 it is hoped that Africa will attain food security (in terms of availability and affordability, and ensuring that the poor have access to adequate food and nutrition); that it will improve agricultural productivity, achieving an average annual growth rate of six per cent, with a particular focus on small-scale farmers, especially women; that it will have dynamic international and inter-regional agricultural markets; that farmers will be integrated into the market economy and given better access to markets, with Africa becoming a net exporter of agricultural products; that wealth will be distributed more equitably; that the continent will be a strategic player in the development of agricultural science and technology; and that it will practice environmentally sound production methods and have established a culture of sustainable natural resource management (including biological resources for food and agriculture) in order to avoid degrading the natural resource base.

The importance of good environmental governance is highlighted by a recent report produced by the World Resources Institute, which explores how stakeholders can foster better environmental decisions that meet the needs of people and ecosystems in an equitable and balanced manner. This report argues that greater transparency and accountability will lead to fairer and more effective natural resource management; and that citizen empowerment and participation generate decisions more likely to promote ecological sustainability, social equity and lasting conflict resolution. The report calls on governments to include the public in decisions that affect ecosystems, and for economic decision-making to take account of environmental impacts.¹²⁰

Mali is one of several developing countries that sees natural resource management as an essential aspect of decentralization. Its law establishes a set of conventions regulating the process whereby government agencies, local governments and local user groups participate in shared decision-making (co-management).¹²¹ The basic assumption is that better environmental governance can help reverse ecosystem degradation through more careful balancing of human needs and ecosystem processes.¹²² Also, that individual, household or communal land resources will

be managed more effectively if local stakeholders are better informed and abide by the essential principles of good governance, since good organizational and management skills are essential if resource use is to be successfully developed (planning and evaluation, construction, operation and maintenance), managed (resource acquisition, allocation and distribution) and organized (decision-making, resource mobilization, communication, negotiation and conflict resolution).¹²³

2.3 STRENGTHENING LOCAL INSTITUTIONS

The undeniable impact of ecological factors on rural production activities and livelihoods has already been noted: a degraded resource base reduces agricultural productivity and is thus a key factor in food insecurity and rural poverty. However, it is becoming accepted that a more balanced understanding of these factors is needed. Recent research findings suggest that rural poverty and crisis are not solely due to ecological changes, but to policy issues too: environmental problems are complex, and are not only related to production activities, practices and technologies, but also (and, perhaps, more importantly) to political and economic power, institutions and regulatory frameworks, tenurial laws and land use and, as previously seen, the empowerment of local users.

Many ecological changes can ultimately be explained by political, economic and institutional factors. In Africa, the precarious situation of Sahelian farmers is not solely due to ecological crisis, but also to the new political, economic and family relationships engendered by social upheaval.¹²⁴ From a historical point of view, it is argued that changes in African agricultural production patterns and methods are not only the result of commercialization and population growth, but are also caused by the changing social, economic and political conditions in which farmers acquire and use productive resources.¹²⁵ The *World Development Report 2003* argues that the assets that people depend on for their livelihoods and well-being need protection and nurturing in order to thrive, and that “the institutions that provide these safeguards range from the social capital and norms governing grazing and shared maintenance to such modern institutions as property rights, fishing quotas, and forestry agencies.”¹²⁶

There is growing recognition that social actors, institutions and organizations are crucially important in natural resource management.¹²⁷

It is argued, for instance, that local resource management can result in better resource use, lower transaction costs, better monitoring and enforcement procedures, greater use of local technical knowledge and more efficient planning. The *Community Forestry Programme* (CFP) in Nepal is a well-known success story. Built on the principle of devolving power and authority to local communities, the programme is extremely well regarded despite the widespread unpopularity of the government. Community forestry is promoted by government, civil society and local bodies, and local communities work with the Forestry Department on the basis of mutual trust and cooperation.¹²⁸

The approaches currently employed by international funding agencies reflect the view that the only way to tackle environmental issues is to give civil society groups, particularly the poor and the marginalized, more say in shaping the policies that impact on their livelihoods and environment. The new World Bank rural strategy for Africa, for example, stresses the crucial impact of well designed policies that give local people greater access to resources and decision-making powers.

However, there is no denying the fact that environmental devolution programmes in various sectors and countries have produced mixed results; or that they frequently fail to meet their stated objectives in terms of positive impacts on resource productivity, stakeholder equity, poverty alleviation and organizational and environmental sustainability. They guarantee neither strong local management¹²⁹ nor substantial progress in the devolution of powers. Moreover, an increasing number of professional and academic economists view rural communities as a diversion from the State-market dilemma (communities have comparative advantages in protecting their members from risk, consolidating social capital and establishing trust, helping overcome the so-called 'free rider' problem and enforcing regulatory frameworks).

The current institutional debate around environmental issues highlights several points; namely, that:

- Effective local institutions supporting environmental devolution are not always in place; and the situation in some communities may require active, complementary interventions by the State;¹³⁰
- The local institutions chosen to receive environmental powers are often unrepresentative, unaccountable to their grass-roots members and/or lacking in sufficient powers;¹³¹

- Even when local institutions are in place and enjoy some degree of legal representation, they often either lack the capacity to function with regard to land tenure, land use or development laws, or do not operate in an enabling legal environment. Municipalities in many countries lack the expertise, personnel, financial resources and authority to deal efficiently with environmental problems; while rural communities need to upgrade their organizational skills in order to adapt or modernize informal insurance schemes, and concentrate on teaching group members new management skills.¹³²
- Even where laws are favourable to environmental decentralization, line departments do not always transfer powers over natural resource management to local authorities, or give them a significant role in deciding and controlling how resources are managed.¹³³
- Failure to clearly, authoritatively and unequivocally assign, government authority to a competent government agency creates jurisdictional obstacles.¹³⁴ Authority (regulations and operations) is devolved to different line departments and ministries on an ad hoc basis, creating overlapping roles and preventing timely and rational decision-making.¹³⁵
- There are gaps between (democratically elected) decentralized tenure administration units and national tenure regimes whose underlying legislation and policy directives may not incorporate 'democratic' principles.¹³⁶

The concept of local governance includes both "the vertical transfer" of powers and responsibilities to local governments and the development of "horizontal networks" between local governments and local non-state actors.¹³⁷ Central governments need to develop the institutional and management capacities required to foster local governance, as well as adequate incentives to pursue genuine decentralization.

Some have questioned the basic assumption that the devolution of natural resource management will be socially redistributive as well as environmentally benign, arguing that policies should take more explicit account of the social dynamics underlying local power relations and the way they are conditioned by the national political environment.¹³⁸ Also, that in the short term, this institutional approach is likely to delay the process of designing and implementing environmental measures and

sustainable land use, since environmental approaches involving local stakeholders are inevitably time-consuming, do not produce immediately visible results and may be expensive.¹³⁹ In the longer term, however, it is probably the best way to institutionalize participation and create an enduring management process.¹⁴⁰

Management of the common property resources on which the poor depend for their survival calls for effective internal leadership; clear member participation; sound financial management; legitimate rules, regulations and guidelines; and implementation and enforcement mechanisms. Thus, it is argued that the implementation of environmental initiatives directly depends on the availability and strength of appropriate institutions and arrangements at the local level. For this reason, many funding agencies are increasingly supporting institutional development. Decentralization processes facilitate local involvement and participation, which are important for project sustainability because they build local ownership and result in more user-friendly projects.¹⁴¹ Current approaches to the management of land rights favour the establishment of broad guidelines for the devolution of decentralized land administration to local governments, rather than the development of detailed legal codes and administrative rules supported by costly and time-consuming mapping, production of cadastres, and titling methods.¹⁴² The *World Development Report 2003* stresses the need for flexible institutional frameworks and institutional structures that are also “capable of learning, evolving, and adapting without losing their core mandate”.¹⁴³

2.4 ADOPTING BROADER PERSPECTIVES

Current environmental thinking and policies emphasize the complexity of environmental issues and the intertwined causes at the root of the present situation: population growth, stagnant agricultural productivity and environmental degradation. Other factors with a detrimental impact on agriculture and the environment are civil wars, poor rural infrastructure, lack of private investment in agricultural marketing and processing, and ineffectual agricultural support services.¹⁴⁴ A more comprehensive approach to three major domains or processes is now favoured: the biophysical (environmental trends); the political/institutional (including changes in the nature and role of state institutions); and the socio-economic (demographic and economic trends, popular movements, etc.).¹⁴⁵ By focusing on intersectoral linkages, integrated and holistic

approaches can tackle areas where human and environmental needs have to be balanced against each other. The *Human Development Report 2003* argues that environmental management cannot be treated separately from other development concerns.¹⁴⁶

Many of the problems with past livestock policies were due to the emphasis on ‘livestock development’ (conceived, managed and monitored by veterinarians and animal scientists) as an economic activity aimed at increasing productivity. The more recent concept of ‘pastoral development’ favours broader social development aimed at improving pastoralists’ living standards,¹⁴⁷ and integrated community development initiatives that address pastoralist communities’ concerns about their livelihoods.¹⁴⁸

The current view is that natural resource management should be considered as a major rural development concern alongside agriculture,¹⁴⁹ and should not be separated from agricultural productivity. A broader conceptual framework is needed for sustainable development, and attention should be paid to economic growth, social issues and capacity building, as well as technical or environmental measures.

Analytical and policy approaches to food security should address issues related to land tenure, resource management and the resolution of land-related conflicts,¹⁵⁰ as well as livelihood strategies and the links between production and consumption, and should avoid symptom-oriented interventions such as food transfers.¹⁵¹ In other words, vulnerability to food crises is a political problem, not a simple technical problem related to food supply and distribution; and analysis of food crises should focus on the political context that defines entitlements to food and land rights. Thus, land tenure and food security are linked, comprising a dynamic system (production, marketing, consumption and investment) that over time generates – and is in turn driven by – structural changes in the distribution of resources within and among households.¹⁵²

In the long term, economic growth will be jeopardized unless it is considered in relation to societal change and environmental management.¹⁵³ In order to achieve the objective of sustainable development, *Agenda 21* links social and economic development with environmental protection and enhancement: “the essence of the integrated approach finds expression in the coordination of sectoral planning and management activities concerned with various aspects of land use and land resources.”¹⁵⁴

2.5 STRESSING CROSS-SECTORAL FRAMEWORKS

The UNDP *Human Development Report 2003* points out that improving environmental management in ways that reduce poverty will require “policy and institutional changes that cut across sectors and lie mostly outside the control of environmental institutions”.¹⁵⁵ A cross-sectoral approach is increasingly replacing the purely sectoral approach to planning, budgeting and implementation; “a goal that is achieved through the design of an effective institutional framework for coordinated, cross-sectoral environmental management”.¹⁵⁶

Since many of the problems linked to sustainable development are intersectoral, they require a broad, more holistic approach rather one that focuses purely on measures directly affecting natural resources. The ‘integrated conservation and development’ approach reflects new social and environmental paradigms in which local communities retain their traditional rights over natural resources, and are allowed to generate income from protected areas through environmentally compatible activities; where commercial logging is not permitted in protected areas, and agriculture and social development activities are developed outside protected areas to draw local people away from them.¹⁵⁷ From this perspective, soil erosion is seen as a symptom of underlying problems involving land rights and tenure, cultural factors, pressure from growing livestock and human populations, and economic policies.¹⁵⁸

Approaching environmental issues through a traditional sectoral framework can hinder the adoption of effective solutions to many environmental problems, and projects that focus exclusively on environmental institutions may have only a limited impact.¹⁵⁹ Integrated approaches are the key to minimizing land degradation and mitigating its social and economic impacts. Initiatives to build and strengthen existing institutional capacities should be promoted, to enable regional, national and basin-level agencies to effectively address and integrate cross-sectoral issues.¹⁶⁰

The concept of community-based natural resource management (CBNRM) has gradually shifted from a relatively narrow focus on local communities and their biophysical milieu to a broader view of CBNRM as an integral element of the forces at work in the environment/natural resources sector. It is now widely agreed that it cannot be understood and assessed in isolation.¹⁶¹ In West Africa, the *gestion des terroirs villageois*

approach put many CBNRM concepts into practice; while the CAMPFIRE Project in Zimbabwe was an attempt at large-scale participatory management of communal resources through a multi-agency partnership (local users, NGOs, academic organizations, etc.).¹⁶² This programme devolved power over wildlife and other resources to local people, and has enabled them to benefit from conservation. In Nepal, the concept of *Forest User Groups* (FUG) is a central plank of the community forestry programme. Members of legally recognized forest user groups jointly decide and plan how community forests will be managed and utilized, in a process that has empowered traditional forest user groups and enabled them to protect and manage their forests while utilizing their produce.

The World Bank's latest environment strategy¹⁶³ and forthcoming water and forestry strategies contain overall guidelines to approaches to rural natural resource management issues, and establish a framework linking rural development to the environment and forest management. These strategies promote an innovative approach to natural resource management (NRM) based on *ecosystem management*: an integrated approach that optimizes use of the natural resource base to meet agricultural productivity goals, while protecting the long-term productivity and resilience of natural resources, biodiversity and the goals of other communities. Tested by the Bank in several pastoral development projects in West Africa, this 'holistic resource management' takes account of local livelihoods and landscapes as a whole,¹⁶⁴ although at the operational level NRM strategies are broken down into manageable investment, institution building and policy programmes/projects, often at single-sector level (forestry or water supply, fisheries, energy, environmental protection projects, etc.).

In conjunction with international donor support programmes, many countries, especially in Africa, have formulated and adopted various National Conservation Strategies, National Environmental Action Plans, Plans of Action to Combat Desertification, Pastoral Charters or Regulatory Frameworks concerning the use of water resources.

National Action Programmes (NAPs) are a key instrument in implementation of the *Convention to Combat Desertification* (CDD). Developed in the framework of a participatory approach involving local communities, they spell out the practical steps and measures to be taken to combat desertification in specific ecosystems.¹⁶⁵ The National Environmental Action Plans (NEAPs) prepared and/or implemented by many countries

with World Bank support involve several steps: establishing policies and legislation for resource conservation; setting up the institutional framework and strengthening national capacity to conduct environmental assessments and establish information systems; developing human resources through formal and on-the-job training; and establishing geographical information systems (GIS) that incorporate environmental information.¹⁶⁶

In Tanzania, for instance, the 1997 *National Environmental Policy* (NEP) identifies major environmental problems such as loss of wildlife habitats and biodiversity, deforestation, land degradation, deterioration of aquatic systems, lack of accessible, good quality water and environmental pollution. This policy not only acknowledges the need for environmentally sustainable natural resource management practices in order to ensure long-term, sustainable economic growth, but also recognizes the indispensable role of local governments in achieving its objectives, given that most local authorities are more attuned to local concerns and better placed to create sustainable conditions. Local governments are better able to educate, mobilize and respond to the local community, and to enhance and implement environmental objectives. The NEP also advocates the creation of environmental committees to coordinate natural resource management at regional, district, ward and village levels.¹⁶⁷

However, it has been claimed that environmental plans and strategies are not always integrated into the process of national development planning, the policies of finance ministries or the plans and policies of line ministries responsible for agriculture, forestry, etc.¹⁶⁸ In Burkina Faso, for instance, the environment has been overshadowed by the main thrust of economic development policies; environmental issues have been marginalized; and more comprehensive policy choices promoting more sustainable farming systems ignored.¹⁶⁹ Although NEAPs have succeeded in raising general environmental awareness among important stakeholders, and have created a framework for discussing the environmental aspects of economic development, their impact has been uneven.¹⁷⁰ Frequently supply-driven, they lack substantial local ownership and have failed to stimulate the integration of environmental considerations into economic and social decision-making and policy reforms.¹⁷¹

Various structural problems with the framework have led some PRSPs to address environmental issues by suggesting plans to improve resource management, while failing to mention land issues in their analysis of

poverty (land rights, access to and use of natural resources by local producers, etc.). This is most common among African PRPs, with some notable exceptions, such as the Mozambique Poverty Reduction Strategy Paper (2001-2005), which highlights key development areas including secure resource rights, access to credit, access to technology, market infrastructure and social services.¹⁷²

Despite their shortcomings, these initiatives are part of a significant effort aimed at reaching a more comprehensive approach, rationalizing the strategic planning process and establishing the required institutional framework.

2.6 FOCUSING ON HUMAN CAPITAL

Much is made of the poor environmental capacities of local stakeholders (particularly local authorities), which are often used to explain the reluctance of central governments to transfer significant environmental powers to sub-national governments and communities, or to highlight the need for local capacity building initiatives.

However, it is increasingly recognized that local governments are unlikely to develop these capacities unless environmental powers and resources are actually transferred to them. There is a need for appropriate training programmes to build their capacity to plan, implement, manage and assess local development policies and strategies, and to provide local stakeholders with adequate information about the laws and real scope of their competencies. Current debate on the issue stresses the following key points:

- Training and education for the poor is a pre-requisite for natural resource management, and investment in natural resources should be based on understanding of how rural people use and benefit from such resources.¹⁷³ Low levels of education in rural areas mean that they see few of the benefits of new technology or improvements in local governance and democracy;
- Appropriate civic education should provide local stakeholders with information on their environmental rights and legal obligations;
- Local customary leaders, especially those with recognized roles and functions regarding access to, and use and control of productive

natural resources, should not be ignored or marginalized by decentralization. Pro-active, innovative measures should attempt to make the best use of their social influence through new mechanisms promoting greater accountability, etc.;

- With better understanding of gender relations in natural resource management, new approaches should be developed to replace those that systematically marginalize women as social actors and ignore their real economic and ecological roles.¹⁷⁴ This understanding should be translated into concrete planning measures.

It is also strongly argued that capacity building and empowerment of local groups should be balanced with a continuing role for central government, to deal with market failures and ensure both social equity and environmental protection.¹⁷⁵

Market forces, economic policies and a range of fiscal instruments, such as tax breaks and subsidies, are particularly influential in creating economic opportunities and providing incentives for people to adopt sound natural resource management practices.¹⁷⁶ A recent World Bank report on the role of land policies in growth and poverty reduction argues that even basic institutions such as land rights and land markets cannot operate without state support in the form of public goods and a conducive policy environment; also, that in environments where other factor markets do not work well, the unfettered operation of land markets by themselves is unlikely to bring about a socially optimal outcome.¹⁷⁷

The concept of 'sustainability' is another key issue in the current debate. The various definitions of this concept are based on social, economic, ecological or institutional perspectives, or on a combination of them all. In 1987 the Brundtland Report defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".¹⁷⁸ This concept was subsequently endorsed by the Rio Declaration on Environment and Development, which pointed out that development is sustainable when "equitably meet developmental and environmental needs of present and future generations". In substance, the concept calls for a more comprehensive, integrated, systemic approach, and a long-term view of development that balances its different dimensions.¹⁷⁹

The notion of sustainability has been embraced by most international funding agencies as a key concept in discussions about sustainable development and natural resource management and use. For instance, the World Bank Development Report 2003 is based on the concept of ‘*Sustainable Development in a Dynamic World*’. New forms of land management are considered ‘sustainable’ if the technologies and planning systems proposed for agriculture and other activities integrate ecological principles with socio-economic and political aims. Thus, natural resource management is as much about productivity and incomes for the current generation as it is about preserving resources for future generations.¹⁸⁰

This concept emphasizes the multi-dimensionality of development, through its treatment of long-term solutions and intertwined economic, social, human and natural perspectives. In the concept of ‘sustainable livelihoods’, which is supported by many international institutions, particularly the British Department for International Development (DFID), sustainability “is interpreted as a function of the successful management of physical environment, economy, social environment and institutions, rather than a reductionist, one-dimensional concentration on one factor”.¹⁸¹

Two UN conventions that deal directly with natural resource conservation also address broad sustainability issues: the Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification (UNCCD) (see Inset 4 below). Inspired by the global community’s growing commitment to sustainable development, the CBD represents a dramatic step forward in the conservation of biological diversity through its focus on the sustainable use of biological resources and ecosystems. Similarly, the objective of the UNCCD is to mitigate the effects of desertification, particularly in Africa, through long-term integrated strategies that simultaneously focus on improved land productivity and the rehabilitation, conservation and sustainable management of land and water resources.

2.7 SUPPORTING A MORE BALANCED TECHNICAL AGENDA

The importance of political and institutional factors in the current debate on the environment does not detract from the fact that empowerment of the rural poor must include better technology to support their labour, land and other assets. If technology is weak or unsustainable, the power to control it is worth little.¹⁸²

INSET 4: OBJECTIVES OF MAJOR ENVIRONMENTAL CONVENTIONS

The Convention to Combat Desertification (Article 2):

1. The objective of this Convention is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in affected areas.

2. Achieving this objective will involve long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level.

The Convention on Biological Diversity (Article 1):

The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

Major technology-related NRM investments will target land and water, and probably include several crucial interventions aimed at restoring soil fertility and productivity,¹⁸³ improving water infiltration and reducing the flow of water and wind over land surfaces, defining appropriate fertilizer use, improving the management of crop residues, protecting biodiversity in the commons (forests, savannahs and wetlands), watershed investments (to improve management of water quantity and quality and develop additional water supplies), and forest-related investments through collective forms of management and the promotion of forest products.¹⁸⁴

The strong links between agriculture and the environment are increasingly recognized, as agriculture is seen as part of broader land use and resource management. In many rural production systems the lines between agriculture, forestry, animal husbandry and other forms of land use are blurred.¹⁸⁵ Agricultural intensification can have a direct, positive impact on the conservation of natural resources as well as on economic growth, poverty reduction and food security.¹⁸⁶ Increased farm productivity and agricultural growth not only increase food availability and income, but also deliver immediate and long-term environmental benefits.¹⁸⁷ Sustainable agriculture is a critical goal for rural development, as growing populations require more productive agriculture in the short and medium term, while longer-term concerns for future generations demand that gains in productivity do not occur at the expense of natural resource conservation.¹⁸⁸ There is no alternative option, and farmlands and the commons will be undermined in the medium to long run if agriculture is not intensified.¹⁸⁹

However, while an agricultural focus is necessary for sustainable rural development, this alone will not suffice. More integrated approaches are also needed: approaches that integrate infrastructure and agricultural technologies, institutions and capacity building, non-agricultural job creation, and human capital. The World Bank's updated rural development strategy recognizes the importance of non-farm economic activities and the essential role of the private sector in rural development, including rural infrastructure and financial services.¹⁹⁰

There is growing recognition of the imperative need to take account of the complex resource allocation and pooling arrangements that many rural societies have developed for both production and consumption,¹⁹¹ as well as their traditional technical knowledge and expertise in managing and protecting the environment.

Finally, the successful transfer of environmental responsibilities to local governments depends upon several factors. In Uganda, for instance, guidelines for local environmental management include the following criteria: integrated and multi-sectoral planning for the environment at district level; collection and dissemination of environmental information among district officers; adequate, local-level technical backstopping by line ministries; dissemination of environmental information from line ministries to local governments, and from the field to line ministries; and the promotion of local capacity building in environmental management.

2.8 SECURING THE LAND

Current policies stress the fact that land is a fundamental livelihood asset, a key input in the rural economy, the primary means of generating a livelihood, and a major vehicle for investing and accumulating wealth and transferring it between generations. According to one Nigerian chief, “land belongs to a vast family, of which many are dead, a few living, and countless numbers are still unborn”.¹⁹² Secure access to land and control over land resources make the poor less reliant on wage labour and therefore less vulnerable to recurrent crises and shocks.

The fact that land is a key asset for the rural and urban poor was stressed in a recent World Bank report aimed at making land policies more effective in supporting development and poverty reduction. In many developing countries land underpins economic activities and the functioning of market and non-market institutions (respectively, credit and local governments and social networks).¹⁹³

When land rights are uncertain, people have little incentive to invest in or conserve land: in other words, incentives to invest in land or measures to protect and manage natural resources are directly proportional to the sense of land security. Furthermore, customary tenure arrangements need to be legally recognized and treated in a positive way, and institutional arrangements involving customary authorities and local democratic structures should be backed and regulated by the State to support customary rights.¹⁹⁴

In order to operate, functioning land markets and efficient systems of land allocation and land use require various procedures and mechanisms: secure land tenure for landowners; secure tenancy rights for tenants; free negotiation of rental fees and contractual arrangements concerning land; efficient titling and recording of land transactions; and an efficient court system to enforce rights.¹⁹⁵

2.9 OVERVIEW AND CONCLUSION

Environmental interventions are more likely to be successful if they are linked to broader development objectives and local concerns and guided by cross-sectoral strategies; and if the people who depend on environmental resources participate in environmental decision-making.

There is growing recognition that “decentralization can make environmental decision-making more accessible to communities and their representatives, in turn increasing the relevance of those decisions and the likelihood they will be implemented”.¹⁹⁶ The only way to develop effective solutions to environmental problems is to allow the populations concerned to lead the process. This requires a political commitment to end the marginalization of key stakeholders and ensure equitable political, economic, social and civil rights, as well as access to basic social services and the assets required to secure livelihoods. Decentralization can only improve environmental governance if it is accompanied by efforts to increase the capacity of local communities to manage environmental resources and influence planning and policy-making.¹⁹⁷

Natural resources are used and managed at various societal levels: by individual farmers and other local users, individual communities, clusters of communities, different levels of local government and regional and national institutions. Each level of society has its own ‘sphere of governance’ and its own interests and priorities.

Local governments play a potentially very important role at the lower level. It has been argued that, for the first time in their history, certain levels of modern government in countries such as Burkina Faso and Mali have a socio-political homogeneity that allows them to accord due weight to various traditional elements of social and political equilibrium, such as the role of elders and traditional chiefs or the place of discussion in management of the community. Local authorities are consequently more readily accepted than central government, which is seen as distant, nameless and ‘foreign’.¹⁹⁸ If local institutions become more accountable to local people and give them a greater role in improving the quality of social service delivery and decision-making, the management of land and its resources will become an integral element of the decentralization process.¹⁹⁹

From an environmental perspective, local governments can only play a significant role in the delivery of efficient services if they:

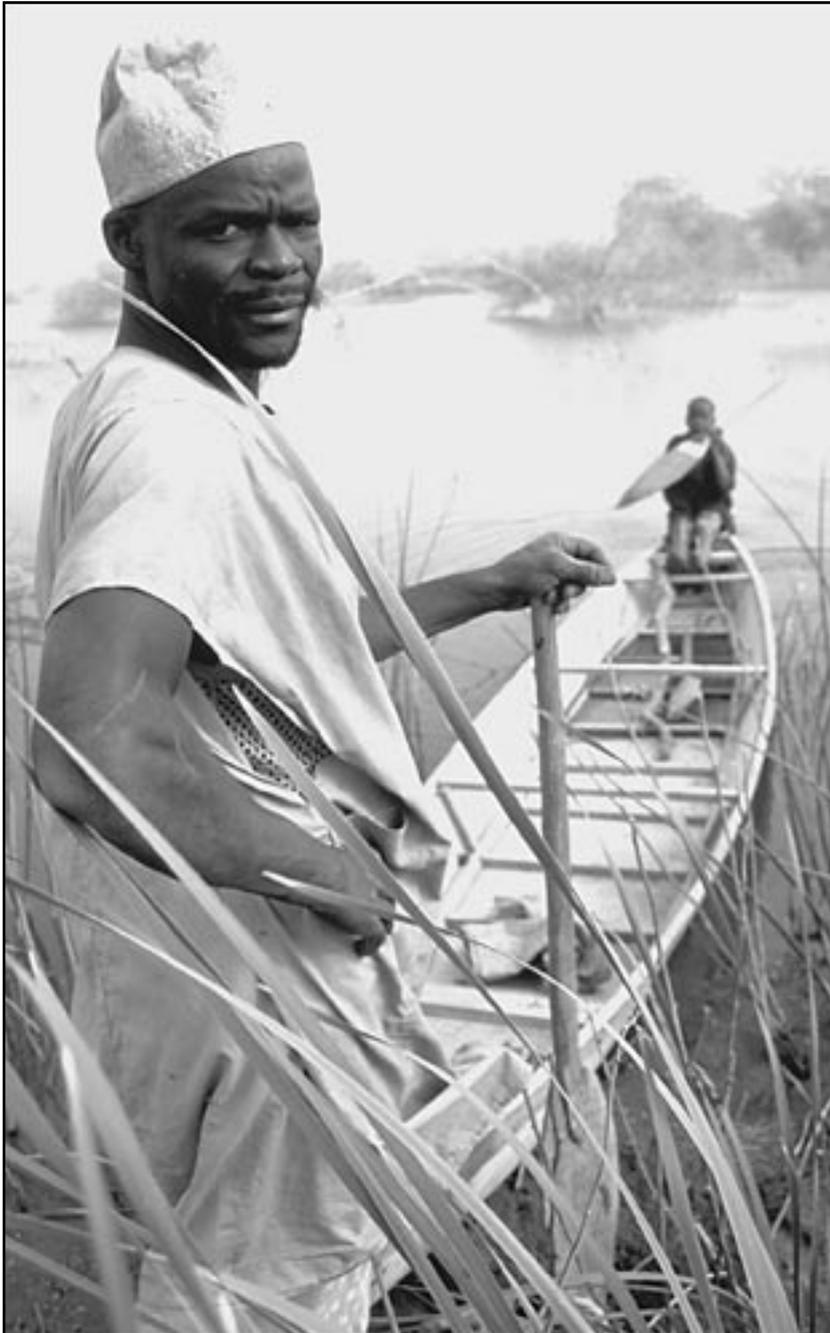
- Have a certain degree of authority and are not tightly constrained by central government;
- Have the capacity to play a catalytic role in increasing environmental awareness at the local level; and are able to mobilize civil society

organizations (community groups, user groups, farmers groups and other interest groups) around key environmental issues.

- Have access to essential environmental information;
- Have the resources required (funds, materiel, equipment) to carry out effective decentralized service delivery, inform local communities and train their representatives;
- Have the power to levy fines and enforce environmental rules defined by central government or formulated by local user groups;
- Have the fiscal authority to generate revenue from the use of environmental services and state or common resources.

On a more cautionary note, the environmental risks associated with misguided decentralization are huge: devolution of powers to the local level could increase pressure on natural resources if local governments and their constituents try to earn additional income from them, or if local elites try to benefit from devolution by managing local natural resources in an unsustainable manner in order to earn more money from them.²⁰⁰ Current thinking frequently stresses the fact that decentralization and natural resource management at various levels are complex processes that interact with one another in many ways,²⁰¹ and that the poor will only participate in democracy and local development if they have a certain degree of tenure security and are able to control their land.²⁰²

As countries proceed with democratization and decentralization the environment once again becomes an arena for political struggle. Because productive resources are essential to new local authorities, both in terms of their economic potential and as a source of legitimacy,²⁰³ the need to improve the environment becomes entangled with demand for political change and greater local democracy.²⁰⁴



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Part II

Towards a new UNCDF environmental policy

CHAPTER 3 Best practices, lessons learned and environmental strategies

3.1 INTRODUCTION

Building on the lessons learned from previous projects and best practices, and awareness of the complex, multi-faceted and long-term challenges of sustainable development, UNCDF has developed a comprehensive strategic tool, the Local Development Programme (LDP). In order to support local development in a coherent manner, the aim of the LDP is to (i) define and implement a sustainable institutional strategy; (ii) provide local government institutions with adequate incentives and financial resources; (iii) facilitate local government support and develop their ability to coordinate civil institutions and mobilize local actors around sustainable local development initiatives.²⁰⁵

3.2 BEST PRACTICES

Through its previous participatory eco-development (PED) projects, UNCDF has gained considerable experience at the micro-level (at the level of territories of individual village / terroirs villageois) with a range of local planning initiatives that can be used as a model for macro-level planning. The micro-level land approaches draw on a combination of technical and institutional elements.

In view of the evaluation findings of previous UNCDF projects, it is now argued that the best environmental practices are likely to be strongly rooted in:

- The results of participatory analysis of local dynamics focusing on crucial ecological constraints and obstacles (such as seasonal 'bottlenecks' in production and labour availability); the heterogeneity of local stakeholders (with respect to gender, caste, wealth, age, origins and other aspects of social identity); the diversity of their interests, ideologies and agenda; and the stratified configuration of local communities. Precise criteria should be used to assess environmental micro-projects (see Inset 5);

- Gender responsive, participatory planning that both understands and addresses the different needs and priorities of groups of resource users, whose differences often stem from their socio-economic situation, gender, age and race;
- Sound local technical knowledge and strategies for opportunistic use of natural resources; local perception/interpretations of external constraints and opportunities according to local priorities; ex-ante risk management strategies and ex-post ‘coping’ and ‘adaptive’ strategies; and optimal use of labour. Research conducted over the last two decades has revealed the dynamics of customary land tenure systems and demonstrated their capacity to provide reasonable security; shown the environmental rationality of pastoralism, based on opportunistic mobility and communal tenure; and proved the capacity of the poor to adopt protective mechanisms through collective action in order to reduce the impacts of demographic, economic and environmental change;²⁰⁶
- A balance between market- and subsistence-oriented forms of natural resource management;
- An understanding of the respective perceptions and expectations of the local community, government bodies, ecological researchers and donors;
- The use of indicators to determine progress towards the reduction of rural poverty, risks and the vulnerability of the poor (particularly to food crises).

3.3 MAJOR LESSONS LEARNED

Previous natural resource management initiatives based on the PED approach have produced mixed results. This is largely due to their sectoral approaches to natural resources, their lack of institutional mechanisms and commitment to ensuring sustainability, and insufficient focus on socio-political parameters.

One of the major lessons learned from past experience is that user groups should play a central role in environmental governance, especially in making critical decisions about access to and use of renewable resources, setting and enforcing rules and determining sanctions.

INSET 5: INDICATIVE CHECKLIST FOR APPRAISAL OF ENVIRONMENTAL MICRO-PROJECTS

The lessons learned from previous projects sponsored by UNCDF and other donors clearly indicate that certain criteria should be used to assess agricultural and environment-related micro-projects.

- **Sectoral policies:** Do projects take account of existing agricultural and environmental policies and programmes (national standards, national and regional plans developed by line ministries), and are they environmentally sound?
- **Environmental impact:** Do projects have negative repercussions on the natural environment in terms of hazards, pollution, land degradation and water-borne diseases?
- **Land tenure arrangements:** (i) Have local land tenure arrangements and incentives been taken into consideration? (ii) Have primary ('ownership') and secondary ('tenancy, leasing') rights of local users been taken into consideration?
- **Social desirability:** Are projects fully endorsed by local beneficiaries (including socially excluded categories and minorities or minority user groups) and considered as priorities by them?
- **Cultural and social acceptability:** Do projects conform to local culture and beliefs as well as local technical knowledge and know-how?
- **Gender sensitivity:** Do projects take account of gender-related environmental priorities and issues?
- **Technical feasibility:** (i) Have similar projects succeeded before or elsewhere? (ii) Are local beneficiaries familiar with such projects? (iii) Are such projects within the capability of local contractors or service providers?
- **Financial viability:** Are minimal recurrent costs (operations and maintenance) clearly defined, and has responsibility for maintenance been established?
- **Management issues:** Do user groups have the capacity to manage and maintain project-related assets and facilities?

Other important lessons learned from past UNCDF experiments are summarized below:

- Since resource management and socio-economic development appear to be closely related, resource conservation should be supported rather than undermined by economic incentives, and each should take account of the other. Appropriate policies should ensure that farmers are offered proper incentives to conserve natural resources while increasing productivity. It is possible to resolve conflicts between short-term economic interests and long-term resource conservation. Economic factors should be considered as incentives or disincentives to resource use and conservation, and conservation measures should be linked to the general economic context. Since it does not produce immediate visible results, natural resource management requires a long-term view of development as well as consistent and continuous political support.
- Some resources, such as forests or rangelands, are ‘self-governed’: major appropriators of this type of resource are directly involved in making and adapting collective rules regarding the inclusion or exclusion of users, as well as determining appropriation strategies, users’ obligations, monitoring and sanctioning, and conflict resolution.²⁰⁷ Local/national stakeholder participation is a key factor in sustainable resource management. User groups can only organize themselves and beat the so-called tragedy of the commons if they can engage in face-to-face bargaining and have the autonomy to change their rules.²⁰⁸ According to the Johannesburg World Summit Declaration, local participation lies “at the heart of integrated policy for the implementation of sustainable development”.
- A crucial constraint to many projects has been the inability to create local social and institutional conditions conducive to the application of technical solutions. If specific technical initiatives are not undertaken as part of a coherent institutional vision, they not only risk failing to attain their own objectives, but may also increase land insecurity and exacerbate the poverty of a large proportion of the population. UNCDF shares the opinion that successful community-based management requires legal regimes that allow local community-based institutions to define, oversee and adapt the rules of resource use.²⁰⁹ Efficient, viable institutions governing property

rights and collective action at the local level are a pre-requisite for the adoption of sustainable natural resource management practices. Customary institutions should be seen as the basis for an integrated resource management system. The restoration of degraded lands and conservation of water, soils, forests and rangelands are only possible if the poor have access to land, services and production inputs. Individual village communities do not have the capacity to affect the management of large-scale natural resources such as grazing systems or river basins: this can only be done at higher institutional levels.

- Natural resource users are highly different and differentiated groups in terms of their capacities and conditions: for example, Sahelian communities in West Africa operate according to different principles and have always had different strategies for coping with the challenges they face.²¹⁰ People's livelihoods and assets depend on their access to productive resources and their ability to control and use them effectively; access depends on participation in various social institutions, as well as on material wealth and market transactions.²¹¹ Local users have different environmental priorities: for instance, poor women prioritize potable water and abundant energy supplies, while nomadic pastoralists in semi-arid areas focus on livestock mobility within and between grazing areas. It is essential to have a participatory planning process that takes account of the heterogeneity of local communities (in terms of gender, social status, etc.), so that marginal groups are not excluded from decision-making processes and the benefits of collective action.
- Private land titling is no longer considered an essential pre-condition for agricultural development;²¹² in fact, there is little evidence that it leads to increased investment in African agriculture.²¹³ The focus has shifted to other constraints (such as those linked to capital and labour) and the importance of a variety of local arrangements regarding rights of access to resources (leasing, tenancy, share contracts, loans). Formal legal mechanisms should take account of the fact that tenure rights are embedded in local socio-cultural systems,²¹⁴ and that common property regimes might be efficient ways of managing common resources.

- Even though they are based on participatory planning processes at grass-roots level, sustainable natural resource management and land use need to be implemented on a larger scale than a village or a few villages.²¹⁵ Because of their complexity, NRM issues should be managed by various types of overlapping and combined organizations involving legitimate and accountable local authorities, rather than by a single organizational division.
- Flexibility is the single most important characteristic of sustainable resource management: it characterizes not a rigid model, but a process involving wide experimentation, learning by doing, innovation, and an enhanced capacity to adapt to unexpected changes and emerging uncertainties.²¹⁶ Nowadays, NRM focuses more on empowering user groups than on determining boundaries, and on ensuring that decisions regarding the allocation and management of lands within 'flexible boundaries' are taken at the appropriate social and institutional level.²¹⁷
- New technologies need to be developed and disseminated to replace NRM practices requiring the intensive use of natural resources, which are unsustainable in the face of present population densities. As rural populations earn more of their income from activities that do not involve the use of local natural resources, innovative approaches are needed invest in human capital through capacity building (literacy/numeracy/professional training, etc.), with the assumption that this may contribute to reduce pressure on natural resources.
- New demographic dynamics are changing existing balances and population distribution,²¹⁸ and categories becoming increasingly blurred by growing interaction between the economies of rural areas and small and intermediate urban centres. Since these centres play (or have the potential to play) a major catalytic role in rural areas because of their multiple links with rural populations, small-scale investment in intermediate urban centres could have a huge impact on natural resources.

3.4 ENVIRONMENT, DEMOCRACY AND POVERTY REDUCTION

UNCDF does not see environmental issues as a separate concern, but as something that should be integrated into a comprehensive process of strategic planning and decision-making. Having incorporated them into the overall strategy adopted with the PED approach, UNCDF now aims to ensure that issues related to land use and resource management are recognized in local policy and planning.

One of the major challenges for UNCDF environmental policy will be bringing the power to make decisions about natural resources closer to poor communities. By transferring environmental decision-making powers to sub-national governments and local communities, and creating economic incentives for best environmental practices, this policy seeks to enhance local interest in and accountability for sustainable use, mitigate practices that are considered environmentally harmful, and improve the allocation of resources.

Close attention should be paid to the links between democracy and the environment: the most successful environmentally sustainable practices involve effective participation by local stakeholders – a fact that reinforces the democratic tenet of decentralization. The best practices are those that not only attempt to preserve the environment, but also try to reflect a particular political vision of local power and accountable democracy. It could be argued that this shift represents a move from ad hoc mobilization and inclusion techniques to more institutionalized, replicable and potentially sustainable forms of participation through local democracy.²¹⁹

Finally, by defining a strategy for improved natural resource management, UNCDF programmes will not only provide local governments with financial resources, but also equip them with a roadmap to ensure that funds can be used to reduce rural poverty in an effective and sustainable manner.

3.5 LOCAL DEVELOPMENT PROGRAMMES AND LOCAL ENVIRONMENTAL GOVERNANCE

In terms of local environmental governance, LDPs would include three distinct but complementary components: institutions, regulatory frameworks and technologies.

Through these components, LDPs will make an important and comprehensive contribution to establishing coordination between sectors and sub-sectors, and preventing trade-offs and incoherent policies. At a deeper level, they will increase local government capabilities by helping them formulate and implement an appropriate environmental policy, and by voicing their concerns at the national level.

3.5.1 Institutions

Ecological factors have an undeniable impact on the production activities and livelihoods of rural populations. Low agricultural productivity, due largely to degradation of the resource base, is a key factor in widespread food insecurity and rural poverty. However, ecological change is not the sole cause of rural poverty and crisis: the impact of policy issues also needs to be taken into account.

Good governance and adequate institutions are absolutely essential to support rural development. For example, the World Bank's rural strategy reflects growing recognition that "the highly centralized institutional structure that characterizes many government administration systems can lead to losses in effectiveness of development investments and policies".²²⁰

Because institutions are crucial assets in the development process, LDPs will strive to help legitimize local institutional stakeholders (local government bodies as well as village associations, user groups, NGOs and the private sector) within the framework of decentralization policies, by working to give them a legal basis and provide them with necessary discretionary powers, and by making them more efficient and accountable stewards of the environment.

LDPs will also help demonstrate that sound institutional arrangements, together with increased opportunities for better economic performance, will lead to sustainable rural livelihoods through better NRM practices, and will strengthen the participation of the poor in local political life and decision-making.

By promoting environmental decisions as part of an integrated local planning process, LDPs will attempt to verify the assumption that effective stakeholder participation confers social legitimacy on decentralized NRM policies and provides essential inputs to policy-making.

The competence of committed and accountable institutions is reflected by their capacity to perform three key interrelated functions: (i) sensing and anticipating problems and listening to messages from the social and geographic fringes of society; (ii) mobilizing dispersed interests and providing forums in which all parties can express their interests and negotiate mutually acceptable arrangements; and (iii) executing agreements or following through on decisions.²²¹

3.5.2 Regulatory mechanisms and policies

Policy instruments directly affect NRM-related decisions made at the farm or household level through their influence on demography, market conditions, the institutional framework, the nature of public and community investments in land management, and ecological conditions.

One of the major challenges facing UNCDF is how best to support the formulation and implementation of local legislative provisions and regulatory frameworks that promote the devolution of authority and transfer effective responsibilities for DNRM issues to local authorities and civil society organizations. Incentives for long-term environmental stewardship could be improved by developing sustainable management plans and introducing predictable natural resource taxes or fees. The main aims of these regulatory mechanisms and laws, and measures to enforce them, will be to:

- Reduce the land insecurity of user groups by legally recognizing the various arrangements determining their access to land (property rights as well as ‘secondary rights’ such as tenancy, leasing, etc.) and clearly specifying their responsibilities regarding the protection of such natural resources;
- Define mechanisms capable of giving local users groups effective control over their productive natural resources;
- Provide appropriate incentives for resource conservation.

3.5.3 NRM technologies

Although LDPs do not have a mandate to support research on new technologies, they will assist local government bodies by providing them with information on technologies and practices that are appropriate for their

environments and have already been successfully tested.

Thus, the challenge for UNCDF is to promote the dissemination of a wide range of sound practices and techniques for effective management of the natural resources on which productive activities depend (agriculture, livestock, fishing, etc.). These practices are likely to provide a sustainable increase in productivity and raise the income derived from the use of natural resources, as well as help local communities cope with adverse shocks (for instance, short-cycle crops and improved cultivars will increase productivity or maintain it in the face of worsening environmental conditions).

In this way LDPs will help make rural populations less vulnerable to recurrent crises caused by the transformation of their natural environment, and reduce the risks to crop and stock production.

3.6 OVERVIEW AND CONCLUSIONS

LDPs provide a coherent development paradigm by stressing the links between poor governance, rural poverty and lack of popular participation in natural resource management. From an environmental point of view, their primary aim is to:

- Promote innovation in the devolution of environmental powers, management responsibilities and significant financial resources to democratic and accountable local institutions, in the context of innovative projects favouring decentralized natural resource management (DNRM);
- Build the capacities of local stakeholders (local governments and communities) to define, plan and implement their environmental priorities and reverse local trends towards poverty;
- Make a technical contribution to the definition of efficient, sustainable use and management of natural resources;
- Promote the dissemination and adoption of best practices for efficient and sustainable use and management of natural resources;

- Favour public investments that enhance income from natural resources (especially from common property resources) in order to improve the livelihoods of the poor.

After analysing the best lessons and practices in NRM, this chapter identified the key elements of an approach aimed at promoting the environmental aspects of LDPs. Each element of this approach – institutions, regulatory frameworks, technologies - will be further analysed in the next chapters.

Complex environmental issues can be addressed through a combination of policies, institutional development and technologies. Each interrelated component of the LDP – institutional, regulatory and technological – is integral to LEG and DNRM measures aimed at reducing rural poverty and achieving sustainable development through a holistic approach. Improving the productivity of the resource base and resilience of local communities will simultaneously enhance their food security and position vis-à-vis the State; while strengthening DNRM institutions at the local level can result in broader economic opportunities, more efficient use of natural resources and greater local accountability for service provision. DNRM measures will also help curb the exodus of rural populations, particularly into destitute urban settlements.

In addressing natural resource issues and initiatives, LDPs stress the empowerment of poor users, the identification and implementation of pro-poor initiatives and the improvement of local livelihoods. By minimizing social exclusion and maximizing social equity and accountability in the access to and use of natural resources, UNCDF will help create socially sustainable initiatives that reduce rural poverty.

The three components of local environmental governance and their characteristics are presented in Inset 6 and discussed in more detail in the following chapters. Particular attention should be paid to the following points:

- Local environmental governance is not a goal in itself, but a means of achieving sustainable natural resource management and thus sustainable livelihoods and poverty reduction;
- It is possible to pursue a process of local environmental governance, but only if there is an enabling political and institutional environment, which will be achieved mainly through land reforms;

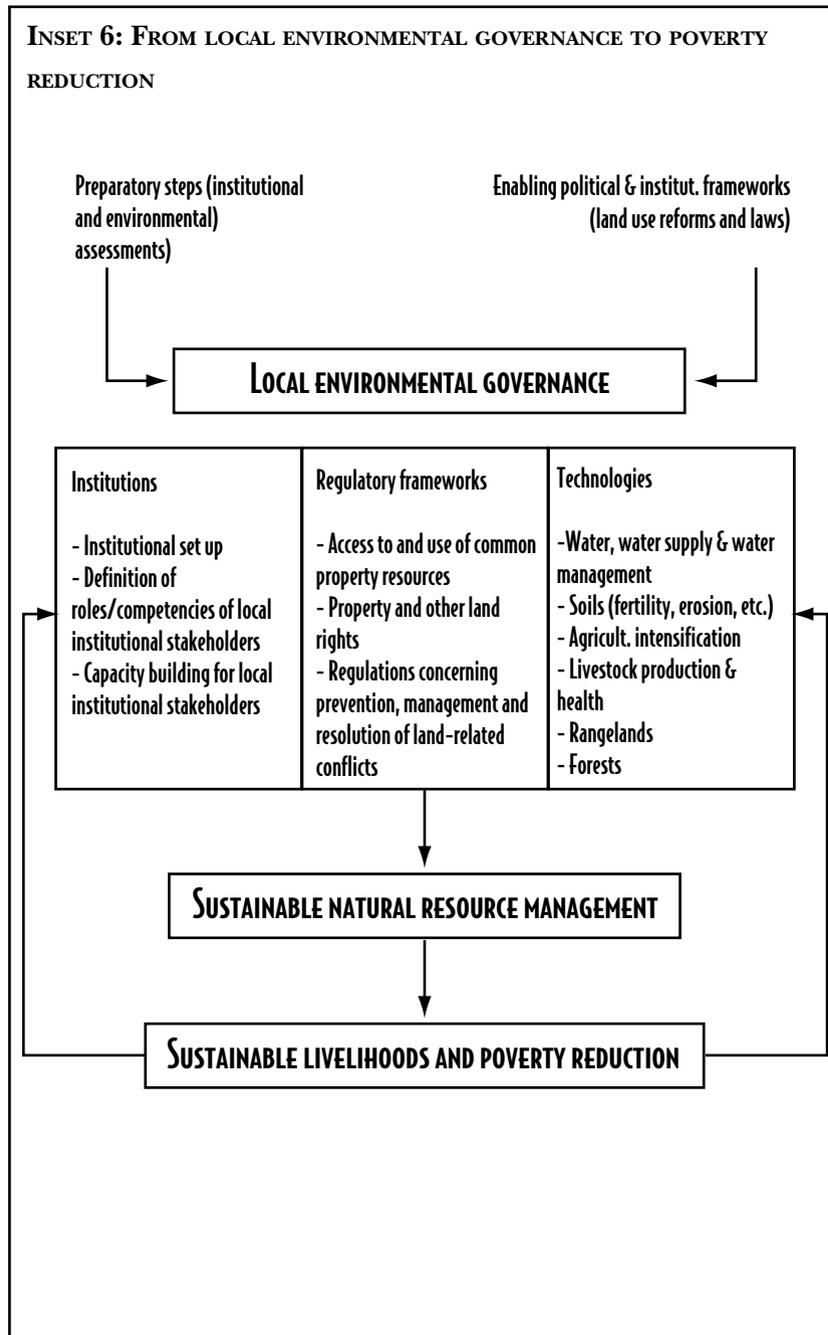
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- In their preparatory stages, local environmental governance initiatives require specific institutional and environmental assessments, including comprehensive reviews of existing regulatory frameworks and environmental action plans at both national and regional levels;
- The local environmental governance approach implies coordinated efforts on institutions, regulations and technologies.

By benefiting from more environmentally sustainable goods and services and gaining access to and use of productive natural resources through adequate technologies, the poor will be able to voice their needs and press for more adequate institutions, better goods and services and improved access to technologies.

At present the entire LEG paradigm is extremely challenging for UNCDF. There are various reasons for this:

- Assessment of environmental institutions and action plans at both national and local levels is not systematically incorporated into the UNCDF planning cycle;
- Apart from a few exceptions (such as Niger, Burkina Faso, Ethiopia, Mali, etc.), UNCDF projects do not take full account of the environmental aspects of national decentralization policies, or use them as leverage to foster environmental decision-making at the local level. So far, only a limited number of pilot environmental initiatives directly aim to improve environmental stewardship by local governments;
- The emphasis on local environmental governance as part of the general concept of governance is still relatively new to the organization, and does not yet affect decision-making (for instance, it is not included in the criteria for project approval);
- At the level of partner countries, UNCDF usually has strong working relationships with the ministers responsible for Local Government, Territorial Administration or Finance and the Interior, but little interaction with line ministries dealing with the Environment, Water or Agriculture;



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- For the most part, current LDPs have not done enough to help local governments establish an environment-related institutional architecture (land use boards, environmental committees, etc.). However, there are some exceptions to this trend: two LDPs in Niger supported commune-level land tenure commissions (see Inset 7 in Chapter 4), and two in Burkina Faso supported inter-village land use committees;
- UNCDF has limited experience in setting up green windows or earmarked funding facilities that specifically address agricultural and environmental issues (apart from experiments in Mali, Ethiopia and Rwanda: see insets in the next chapter);
- UNCDF also has little experience in increasing the capacity of deconcentrated services to promote agricultural and environmental extension activities.

The next chapter will identify the major elements of the UNCDF institutional approach to fostering local environmental governance.

4.1 INTRODUCTION

Since most environmental crises stem from institutional causes (lack of organizations to supervise access to and use of natural resources or enforce communal rules and prevent/manage land use-related conflicts; or lack of rules defining conditions for access/use/control of natural resources, etc.), the building and strengthening of local institutions is a critical element of resource management.

This is why it is imperative for LDPs to foster NRM-related institutions, in order to promote - in inclusive, transparent and accountable ways - the effective participation of all stakeholders, including the poor, at appropriate levels of the decision-making process.

The general UNCDF institutional perspective addresses two distinct but complementary issues:

- (i) Establishing an adequate organizational architecture (institutions/organizations, i.e., *the players*) that includes local authorities but does not exclude other stakeholders;
- (ii) Establishing sound institutional arrangements (institutions/norms) that influence the behaviour of local stakeholders (*the rules of the game*).

4.2 CONSOLIDATING FORMAL AND INFORMAL ORGANIZATIONS

In the area of institutions/organizations (i.e., executive organizations or structures with recognized roles), LDPs can efficiently contribute to the creation and/or consolidation of formal and informal entities capable of defining, negotiating and implementing coherent DNRM initiatives.

Due to the nature of DNRM issues, LDPs will necessarily involve stakeholders from many sectors (agriculture, livestock, forestry, marketing, etc.), local-level institutions, civil society and the private sector, and will

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focus on processes of change aimed at defining the interactive roles and functions of these institutions, rather than on the simple reproduction of organizational forms.

The basic assumptions underlying UNCDF environmental policy are as follows:

- Representative and democratic institutions should receive significant discretionary environmental powers. UNCDF shares the opinion that even the most accountable, democratic local authorities may be irrelevant without discretionary powers, as it is these powers that enable them “to respond flexibly to local needs and aspirations, making them relevant to their constituencies”;²²²
- The rural poor will only be able to reduce their poverty if they are organized and empowered to negotiate adequate access to natural resources with other interest groups (at both local and higher levels);
- It is not only important that the poor gain access to the means of production, but also that they participate in decisions regarding basic services and social and economic infrastructures;
- Local governments are more productively efficient, as they are not only better informed about local preferences and politics, but also about local variations and costs.

The very concept of ‘local environmental governance’ advocated by LDPs suggests a multitude of local actors involved in managing issues that cannot be dealt with by any single individual actor. Therefore, LDPs are essentially intended to:

- Promote and/or consolidate specialized entities (committees, task forces, etc.), which will coordinate and supervise DNRM-related initiatives at the level of local government, in accordance with national priorities (see Inset 7);
- Promote and/or consolidate consensus-building structures at local government level, in matters related to the prevention, management and resolution of land-related conflicts;

- Facilitate the creation and/or consolidation of local support institutions (such as non-governmental organizations, community-based organizations, interest groups and the private sector) capable of supplementing the management capacities of local government bodies and providing specific technical assistance;
- Given the fact that the different components of ecosystems (plants, animals, etc.) do not necessarily correspond with administrative boundaries, LDPs will coordinate cross- or trans-boundary planning on NRM-related issues between districts and/or sub-districts; and, when necessary, facilitate the formation of joint committees to address specific environmental problems;
- When appropriate, LDPs will help user groups federate into higher-level organizations that account to their members on the management of large forestry resources, irrigation systems, watersheds, rangelands, etc. Assistance could even be provided to help these system-level organizations federate at higher levels (regional and national). LDPs will assume that federation can facilitate conflict resolution between local units, as well as information sharing and collective negotiations with governmental bodies and/or services providers.

4.3 PROMOTING REGULATORY FRAMEWORKS

In the area of institutions/norms (i.e., all formal regulations, conventions, standards of conduct and rules governing individual and collective actions), LDPs will support the institutionalization of DNRM procedures and mechanisms, and promote the incorporation of democratic principles into the regulatory frameworks governing local land systems. If this does not happen, the entire decentralization process will only serve to reinforce central authority, and local groups and communities will continue to play a meagre role in a development process dominated by unaccountable administrators and technicians. Therefore, a major challenge for LDPs will be to:

- Promote the evolution of customary land laws and the introduction of new regulations on local resource management, which will include eliminating legal discrimination against women, marginal

INSET 7: TENURE COMMISSIONS IN NIGER

Since 2000, UNCDF has supported two local development projects in Niger: one in the Diffa Region of eastern Niger (the Nguigmi Local Development Project), and one in the Maradi Region of central Niger (the Mayahi Local Development Project). Although they began before local governments were put in place, the two projects have helped the Government (the *Haut Commissariat à la Réforme Administrative et à la Décentralisation*) create and operationalize 13 pilot rural *communes* (sub-district level) with a total population of about 380,000 persons.

Each *commune* has a 'shadow' council composed of informally elected councillors, which pave the way for formal councils (forerunners of formal councils that will be constituted after the elections). Local authorities supervise the preparation and approval of local development plans, which include specific provisions for environment-related investment.

In collaboration with the Permanent Secretariat for Land Tenure, a government body with primary responsibility for promoting the creation of a national institutional framework for land use and natural resource management, the two projects have helped establish experimental *tenure commissions* in all 13 *communes*. The aim is for these commissions to bridge the gap between District tenure commissions (composed of representatives of line ministries) and grass-roots user organizations and give local elected authorities greater responsibility for environmental stewardship. The experimental commissions address land-related issues, such as recognizing the land rights of individual users and/or user groups; titling; verifying the use of attributed lands; informing and sensitizing local people about issues related to renewable productive natural resources and the environment; land and local resource inventories; land demarcation; land use registers; prevention and management of land-related conflicts; etc. *Commune* land use committees strengthen the relationships between line ministries and local users and promote the formulation and implementation of coherent land management plans.

The results were presented at a national workshop at the end of 2003, and will have an impact on future decentralization policy, particularly by contributing to further define environmental responsibilities and capacities of local governments.

groups and minorities; facilitate the establishment of guidelines concerning the effective devolution of the administration of land and natural resources to different institutional levels, in accordance with the principles of legitimacy, representation and accountability;

- Assist local government bodies in defining equitable agricultural and environmental plans for developing common property resources, in view of their great significance for local livelihoods, food security and environmental quality.²²³ These plans will acknowledge the different types of rights of all natural resource users and negotiate new management mechanisms with central government representatives;
- Create and/or improve incentives for environmental stewardship (long term) rather than simple environmental exploitation (short term), by establishing transparent systems for taxes, fees, charges and concessions;
- Promote the definition, introduction and institutionalization of practices, arrangements, contracts, participatory planning mechanisms, inter-government charters, consensus-building mechanisms, procedures and decision-making processes for the prevention, management and resolution of conflicts over land; as well as transparent accountability mechanisms (both horizontal and vertical, and upwards and downwards) and self-evaluation procedures. Because they are based on local social capital, such 'rules of the game' will allow local institutional actors to operate according to the principles of LEG, on both an individual and collective basis;
- Participate in the establishment of procedures that will: (a) help legitimize local user organizations through formal, legal recognition by the State; (b) help strengthen local informal land rights and thus create greater security for local user organizations; (c) help local user organizations dispose of legal means of calling central state and local government bodies to account; (d) help ensure that the State respects and enforces the rights of local user organizations to control and manage the resources on their lands and exclude certain parties from using them;

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- Help define regulations that transfer appropriate fiscal powers and resources to local authorities (accompanied by adequate technical support), and allow them to benefit from the revenue raised from taxes and fees on natural resources (including commercially valuable resource-use opportunities);
- Address the enhancement of women's land rights, through appropriate regulatory frameworks, education activities and advocacy.

Many land-related conflicts stem from poor enforcement of existing laws, the imposition of national laws over customary laws, and/or a situation of 'legal pluralism' in which different, incompatible regulations overlap. Therefore, LDPs will not only need to reconcile the various needs of different stakeholders, but also support a functional and reliable legislature and judiciary.

To help resolve conflicts over land use, LDPs will be built on a thorough, preliminary assessment of the causes and factors of current and potential land conflicts. This appraisal will take account of traditional mechanisms for the prevention and resolution of such conflicts, as well as the specific roles of customary leaders and institutions.

4.4 FAVOURING INTERACTIONS BETWEEN INSTITUTIONAL LEVELS

Basic principles

The basic principles underlying the UNCDF institutional approach to the environment are summarized below:

- **Consensus building amongst local stakeholders.** Because of the physical, economic and social components of natural resource management, it is important to establish cooperative relationships and consensus building mechanisms at and between all institutional levels and all local stakeholders (democratic organs of local government, representatives of the central State government and representative leaders of local user groups). LDPs will therefore help support strategies aimed at legally recognizing the multiple interests, priorities and agenda of these stakeholders, and will promote collaboration between institutional levels in terms of decision-making, service provision, resource flows and accountability;

- **Collective action.** Decentralization essentially entails setting up networks involving different actors at different levels. The goals of all stakeholders concerned will be achieved through collective, rather than individual, action: management of DNRM initiatives should be shared among them by means of charters or legal conventions specifying their respective areas of interest, responsibility, rights and benefits. It should also be stressed that natural resources may be used in different ways at various institutional levels (by user groups, individual village communities, clusters of close village communities, local governments and the national community) according to their own interests, priorities and strategies, and with different associated costs and benefits;
- **Multi-level cooperation.** LDPs assume that complete decentralization is neither possible nor desirable with regard to NRM. It has been argued that decentralization policies are most likely to be implemented effectively in situations where the government is politically secure.²²⁴ Complete decentralization could also be counterproductive for sustainable resource management and conservation, since communities would have no incentive to consider the effects of their actions on their neighbours or successors. In such conditions, local people might degrade or deplete resources more quickly and efficiently, perhaps in conjunction with external entrepreneurs.²²⁵ Given the complexity of the situation, experiments aimed at supporting good environmental governance at the local level will stress the importance of efficient coordination among all stakeholders and cross-boundary initiatives. This would include horizontal forms of cooperation and consultation between local governments at the same institutional level (known in French as *inter-communalité*), with the constitution of networks or federations of local governments;
- **Spheres of governance.** In NRM, the appropriate level for decision-making is determined by the scale of the natural resource system to be managed. For instance, a small grazing area can be managed by a small pastoral community, while large dry season transhumance areas would need to be managed at larger institutional levels. A well-defined local environmental governance approach should therefore define 'which level of government should do what' and

determine their spheres of governance. All forms of NRM should entail ‘co-management’ of natural resources inspired by three key principles:

- ***Subsidiarity***: the efficient transfer of specific powers to local stakeholders, in a way that does not threaten sustainability. According to this principle, activities should be planned and implemented at the level closest to grass-roots level, on the basis of the comparative advantage of each institution (a higher authority should only act if a lower authority cannot act or has proved its incapacity to do so). The assumption is that low-level governments are likely to be more aware of local environmental priorities and to adjust measures accordingly. It is also argued that a ‘minimum standards approach’ should complement environmental decentralization, by specifying the boundaries to the domain of local autonomy without restricting discretion within those boundaries;²²⁶
- ***Complementarity***: each institutional level operates within its own particular arena, and according to its own responsibilities. According to the principle of ‘tangled powers’, broader groups may be in a better position to appreciate long-term or large-scale issues than local groups, and able to act as disinterested arbiters in disputes that cannot be resolved locally;²²⁷
- ***Equity***: all local stakeholders’ rights to natural resources are legally recognized and legitimized. If this principle is respected it should be possible to avoid one of the risks of decentralization: exacerbating regional differences in income, which give additional advantages to geographical areas that are already endowed with rich or potentially rich natural resources.

4.4.1 The role of central government

UNCDF shares the view that NRM-related problems cannot be solved by simply recognizing the role of local governments and communities. Instead, it advocates a key environmental role for central government, which can establish policy, regulatory and institutional frameworks for sustainable resource management and environmental performance;²²⁸ formulate land reforms; decentralize environmental responsibilities and

funding to sub-national governments and user associations; and define a predictable share of revenues and channel funds to local governments to develop markets, test specific technologies, etc.

The *World Development Report 1999/2000* argues that central government should retain responsibility for most funding, but that “the better information available to local officials can be tapped by involving local governments in the delivery and management of social services”; and that central government should also retain a monitoring role, to ensure that redistributive goals are satisfied.²²⁹ Central (and provincial) institutions are better for assessing broader problems and trends (such as ensuring significant pro-poor policies and environmental priorities), establishing enabling legal environments, and for acting as arbitrators to resolve certain local conflicts. Thus, poverty reduction policies entail a crucial role for central government as well as combined effort at different levels.

There are several arguments supporting a key role for central government in environmental issues:²³⁰

- Because environmental changes have delayed impacts, central governments are the only agency that can take appropriate action to prevent or mitigate their effects;
- Many environmental problems are directly related to market failures (in terms of prices of environmental goods and services, for example), and the private sector cannot achieve optimal environmental outcomes on its own. Therefore, only central government can create markets and introduce regulatory frameworks that allow flexibility in achieving environmental objectives, while defining mechanisms aimed at improving compliance with environmental regulations;
- Environmental problems reverberate across a range of sectors: therefore, policies and concerted efforts need to be coordinated by central government;
- Because many environmental impacts have broad cross-boundary effects, they can only be dealt with by central government, in the context of a national framework.

4.4.2 The role of local government

It is increasingly acknowledged that the ongoing process of decentralization, which involves the delegation of powers and regulatory functions to local governments, has highlighted the need for greater local government involvement in many areas of environmental regulations and measures.

By strengthening and empowering local institutions, LDPs will help prepare the way for local governments to assume significant discretionary environmental powers and key roles and responsibilities in DNRM activities. It is true that local authorities do not necessarily have the required technical environmental expertise, but UNCDF believes that they must be allowed to gain the experience they need to fulfil their role through 'learning by doing'.

The devolution of greater environmental powers to local authorities could improve their power and legitimacy, by providing both the revenue and the power to make decisions about resources that affect the daily life of their constituents.²³¹

Furthermore, LDPs will foster the capacity of local governments to:

- Facilitate participatory definition of local priorities for resource use, by attempting to integrate subsistence and commercial uses of the same natural resources, in close collaboration with line ministries as well as local village communities and civil society institutions, and in accordance with national environmental policies;
- Mobilize civil society's environmental institutions (user groups, producer associations, customary bodies, the private sector, etc.) and favour more interactive and mutually supportive relationships;
- Help village communities and user groups set up local environmental schemes and provide them with funding for related micro-projects;
- Facilitate the preparation by local user groups of sustainable, enforceable and flexible local bylaws and NRM rules at village or inter-village level, and endorse their status as legal instruments;

- Help local user groups monitor and enforce NRM rules within clearly defined geographical boundaries;
- Set up projects that are outside the competence of individual village communities, commissioning feasibility studies, tendering for contracts and financially managing local projects;
- Define the accountability mechanisms and financial procedures needed to successfully manage environmental resources and convey resources to user groups;
- Provide a voice for marginal local groups, including women, who may be excluded from NRM-related decisions;
- Establish enabling policies, services and infrastructures to support the development of rural non-farming activities (in order to reduce pressure on natural resources);
- Assess the causes and factors of land use-related conflicts, organize training on conflict prevention and management for local community leaders, and assist with procedures to enforce rules and resolve disputes (including enforcing penalties against people from outside the community who break laws governing resource use);
- Make investments in the resource base involving several villages (e.g., new boreholes or irrigation facilities, afforestation, etc.);
- Mobilize resources for community-scale investments (for example, through local taxes) or to regulate natural resource conservation;
- Establish and control cadastral registries;
- Provide potential private investors with adequate information on overall development goals, create appropriate investment incentives, solicit their active role in investment and include their activities in local plans;
- Provide special operation and maintenance services;
- Establish simple reporting or budgetary rules for local user groups;

- Collaborate with line ministries in assessing the environmental impact of NRM-related private and community initiatives.

UNCDF shares the opinion, expressed by many other agencies, that good environmental governance depends on extensive webs of interdependency and collective frameworks for action, involving accountable local authorities, appropriate line departments, influential and responsive customary leaders and a dynamic civil society. Thus, LDPs will assist the formulation of regulatory frameworks aimed at clarifying the relationships between these stakeholders and preventing rivalries and conflicts. In order to cooperate with each other, each stakeholder should have tangible, complementary incentives.

However, UNCDF also recognizes the fact that supporting local governments does not necessarily guarantee the emergence of enhanced local governance; and that it is important not to underestimate the potential significance of rivalries between local governments and user groups and/or elected officials and customary leaders over the use of valued natural resources.

4.4.3 The role of grass-roots user groups

The decentralized governance paradigm not only emphasizes environmental stewardship by local governments, but also enhances the role of local grass-roots organizations, civil society associations and the private sector in influencing environmental decision-making and managing local resources.

As the primary stakeholders in local natural resources, legitimate user groups deserve a central role and formal responsibility for NRM. LDPs will contribute to their empowerment by helping these groups:

- Establish clear criteria for membership;
- Participate in decision-making processes regarding access to and use of natural resources, especially defining priorities;
- Work with local government to define and enforce sustainable rules for the use of collective natural resources;
- Participate in conflict prevention and management initiatives, through their leaders;

- Monitor sustainable use of local natural resources;
- Provide a number of operation and maintenance services;
- Make small-scale investments in the resource base (for instance, by constructing/maintaining water points or irrigation facilities);
- Assist individual farmers with appropriate initiatives aimed at improving soil fertility, combating erosion, increasing water infiltration and the like;
- Mobilize resources for individual and collective investment in best NRM practices, and make new investments in the resource base (e.g., by creating nurseries, planting trees or shrubs, creating grazing areas, etc.);
- Report on the use of their natural resources;
- Protect the rights of local minorities who may be excluded from NRM decision-making.

The involvement of user groups in NRM will have obvious financial repercussions, increasing the costs borne by them in infrastructure provision and maintenance, the acquisition of inputs and product marketing, the adoption of better technologies and management practices, opportunity and transaction costs, and the like. Therefore, LDPs will encourage their active involvement with the following conditions in mind:

- User groups should only actively participate in sustainable NRM if: (a) the tangible economic benefits and incentives (including those related to primary and secondary land rights) outweigh the costs associated with their involvement; (b) they perceive they have a stake in preserving their local natural resources, and respond to market incentives for economic development; (c) they are able, in the short term, to reduce the tension between maximizing production and income; and (d) in the long term, their efforts are likely to reduce vulnerability to external shocks while reconciling basic economic, social and environmental concerns;
- The long-term viability of user groups will be strengthened by helping them raise enough funding and/or labour and materials to carry out their tasks, or to pay others to do so;

LANDS OF THE POOR

- Low-cost and high-return technologies for small-scale managers will be introduced by improving, rather than replacing, local technical practices.

Collective action by user groups is expected to reduce NRM-related transaction costs, which are usually very high in areas where communication is poor and population densities low. However, LDPs will also stress that:

- Collective action will be based on local ‘social capital’, shared norms and patterns of trust, reciprocity and exchange (collective action is more likely to be successful if the resource and the user group are small);
- User groups will be accountable both to their members and to local government institutions.

4.5 BUILDING LOCAL ENVIRONMENTAL CAPACITIES

For UNCDF, public awareness is an important aspect of local environmental governance. Thus, local capacity building is an essential component of any sustainable policy supporting environmental governance.

As any transfer of powers and resources to decentralized local governments must be accompanied by a considerable effort to build local technical and management capacities, LDPs will aim to make local stakeholders capable of assuming their responsibilities and fulfilling their respective roles in NRM. They will also aim to narrow the information gap between local governments and other stakeholders.

The basic assumption is that the creation and strengthening of self-managing organizations does not happen without capacity building. However, this does entail certain risks, such as local elites capturing the leadership. A strong power structure at the local level may not only undermine local initiatives, but also allow the village elite to divert any central resources channelled through community organizations.²³² It has been argued that “although not necessarily bad, this can result in the hijacking of resources unless transparency and accountability are somehow enforced.”²³³ LDPs will help overcome this risk by involving marginal, voiceless or powerless social categories and working to create the best conditions to improve social equity and productivity.

LDPs will facilitate a set of information, awareness-raising and training initiatives for all the institutional actors involved; namely, members of local government bodies and representatives of user groups/peasant farmer organizations at the grass-roots level, as well as those in charge of deconcentrated state-run technical departments.

4.5.1 Capacity building for local governments

LDPs will provide appropriate training for elected members of local government councils and members of local committees responsible for DNRM composed of both elected individuals and representatives of line offices. Training will cover the following areas:

- Existing basic regulations and legislative texts (rural codes, pastoral codes, codes related to water, forests, halieutic resources, etc.);
- Participatory techniques in the diagnosis, planning, programming, budgeting and management of initiatives related to land use planning and NRM, particularly in the management of common property resources (forests, grazing areas, etc.);
- Basic financial management in the collection and use of current and/or potential tax revenues derived from specific common property resources;
- Essential principles concerning contracts to be drawn up between local governments and entrepreneurs or local service providers, in the context of designing, building and engineering rural structures and infrastructures;
- Guidelines, procedures and technical and financial mechanisms for delegating specific responsibilities to grass-roots farmer organizations and user groups for the protection, rehabilitation and management of renewable natural resources on their respective village lands;
- Principles and practices regarding the prevention and management of land-related conflicts between different user groups and/or between different types of communal, inter-communal and inter-village land-use;

- Specific forms of investment that should be undertaken by decentralized local government bodies in order to support measures to rehabilitate, protect and manage productive natural resources.

It is imperative that LDPs help local government bodies avail themselves of simple and effective tools (e.g., databases) to monitor and evaluate the impact of environmental measures and initiatives. Their assessment should be based on key quantitative and qualitative indicators, which will enable them to:

- Cooperate with government ministries in evaluating and reporting on the general impact of local environmental management initiatives on the local economy;
- Assess some aspects of the process of rural impoverishment (particularly changing patterns of control over inputs – land, animals, pastures - and food security) and the impact of the decentralization process on local poverty (for example, with regard to the quality of the technical services delivered to local people);
- Review changes in the conditions regulating users' access to common property resources and regarding their management and control (e.g., obtaining land titles or establishing regulations for the use of common resources).

4.5.2 Capacity building for user groups

LDPs will make considerable efforts to educate all members of local user groups on DNRM-related issues, working on the assumption that they can only gain the authority and skills needed to protect and manage their natural resources if they are informed about the environmental governance roles and responsibilities of local governments and communities, and if their leaders benefit from appropriate support services.

Therefore, in addition to supporting public awareness on general environmental issues, LDPs will provide the leaders of user groups, including women's groups, with more specific and appropriate training on:

- Basic regulations and legislative texts concerning natural resource management (these texts should be made available in the main national languages);

- The mechanisms and procedures that allow them to work with local government bodies;
- Participatory techniques, tools and instruments for diagnosing, planning and programming village land management micro-projects;
- Constructive practices regarding the prevention and management of land-related conflicts between different users and/or over different uses for particular village and inter-village lands;
- Best practices, technologies and costs pertaining to natural resource management, soil conservation, soil fertility management, water management, forest resource management, management of grazing lands, the association between animal husbandry and agriculture, use of agro-inputs and use of protective products for animals.

4.5.3 Capacity building for technical services and NGOs

LDPs will promote training initiatives for the agents of deconcentrated technical departments, accountable local NGOs, community-based organizations and local interest groups, to enhance their capacity to assist local government bodies in their new roles and supply user organizations with adequate support/advice in identifying and articulating their most pressing needs.

Building the capacity of NGOs and technical services is an important factor in overcoming common obstacles to decentralization. Improving the performance of the technical services will have a significant impact on natural resource productivity, even if these services are not formally under the authority of local government bodies. Agents should receive substantial support in the following areas:

- Participatory planning of NRM initiatives and preparation of environmental assessments;
- Aid for specific marginal, minority or socially excluded groups who are not organized or recognized (for example, women, ethnic indigenous communities, some low socio-professional categories, etc.), who lack a sense of identity and self-worth and whose land rights and voices may be ignored by formal institutions;

- Integration of poor and marginal people into a wider circle of allies (associations, federations, etc.) to achieve a more influential political voice;
- Use of improved local technical know-how;
- Communications (rural radio and newspapers in local languages, new information technologies, etc.) to disseminate experiences in decentralized natural resource management and transfer new agricultural technologies;
- Development of simple early warning systems to track the effects of local climatic shocks and natural disasters;
- Formulation of contingency plans to help local populations cope with the effects of major crises (for instance, public works programmes that could be quickly initiated; establishing self-financing insurance schemes adapted to rural areas);
- Technical monitoring systems for natural resource management initiatives.

4.6 Overview and conclusion

The general objective of LDPs is to define and implement a coherent institutional strategy that will increase the responsibilities of local governments and provide them with incentives for collective action and operation.

More particularly, as far as environmental governance is concerned, LDPs should aim to support an appropriate institutional and administrative framework that allows local government and civil society (user groups, producers associations, etc.) to play a critical role in decision-making and the management of renewable natural resources.

By supporting innovative forms of decentralized natural resource management, LDPs will not only help improve local livelihoods, reduce poverty and decrease food insecurity, but also help legitimize local decision-making and increase public participation in and acceptance of government decisions, thereby promoting the emergence of a democratic culture.

This chapter has analysed the complex institutional dimensions of a new UNCDF environmental policy which would focus on the strengthening of formal and informal organizations, promotion of regulatory frameworks regarding access to and use of natural resources and capacity building of local stakeholders. The next chapter will focus on more specific planning and budgetary mechanisms for environmental initiatives.

CHAPTER 5 Participatory environmental planning

5.1 INTRODUCTION

UNCDF projects are essentially oriented towards sustainable human development through the provision of technical assistance and small-scale grants, and are designed to stimulate and sustain popular, democratic participation in decision-making and planning. The planning of measures aimed at protecting, rehabilitating and managing natural resources is part of a more comprehensive and coherent planning system, and of strategies intended to ensure livelihood security and reduce poverty.

5.2 BASIC PRINCIPLES FOR ENVIRONMENTAL PLANNING AND BUDGETING

Through its LDPs, UNCDF provides local governments with a financial facility to support their budget for investment in rural development and poverty reduction: the *Local Development Fund* (LDF). They can only receive this facility if they meet certain conditions, which include the participatory preparation of coherent local development plans. The development plans prepared by rural local governments, which is the most common type of local government supported by UNCDF, should (ideally) include a specific section on the environment (see Inset 8). (For general principles regarding planning and budgetary mechanisms and procedures in local development plans, see the UNCDF publication *Empowering the Poor*).

The use of appropriate procedures and mechanisms supported by LDPs will enable local government bodies (at district and/or sub-district levels) and communities (farmer organizations, user groups, etc.) to plan, finance and directly supervise a series of activities within their respective jurisdictions and 'spheres of governance', in order to better protect, rehabilitate and manage the resource base while increasing its productivity.

Within the context of their contribution to the achievement of the

INSET 8: (SUB)DISTRICT DEVELOPMENT PLAN: ENVIRONMENTAL SECTION

In addition to a concise *socio-economic profile* of the (sub) district and a short presentation of the local *institutional set-up*, the *environmental section* of a local development plan should be a short text comprising three key sections:

1. A short quantitative and qualitative description of local renewable natural resources.
2. Identification of a limited number of strategic priorities related to land use and natural resource management: these strategic axes will reflect major environmental orientations or guidelines defined by the Region and District environmental plans (where available).
3. Prioritization of local agricultural and environmental needs for each strategic priority: this section of the plan synthesizes the results of participatory diagnostic assessments undertaken at the level of villages or, preferably, clusters of villages in each (sub) district.

The development plan itself should include a one-year or two-year investment plan, including a budget (corresponding to the annual allocation of the environmental fund): a table presenting a set of agricultural and environmental micro-projects planned for each strategic priority over the period, with their estimated capital and recurrent costs and setting out the specific responsibilities of each institutional level.

Millennium Development Goals (MDGs), LDPs should particularly be concerned with:

- Improving the economic efficiency of small producers who practice an intensive, permanent and diversified form of agriculture on relatively small plots and in densely populated zones;
- Supporting new economic opportunities favouring the poorest groups with no access to quality productive resources.

Existing LDPs include at least two major financial scenarios:

- Local governments are provided with a single financial facility (an non-conditional local development fund) for all their investments, i.e., collective social services and infrastructure, as well as environmental measures. Concrete incentives encourage the use of a significant portion of the fund for initiatives to improve local environmental governance and protect and manage productive natural resources. This option is adopted by the majority of existing LDPs, although the integration of environmental concerns and creation of concrete incentives remains a major challenge;
- Local governments may also be provided with a (parallel) environmental fund, i.e. a green or environmental window, an earmarked funding facility that specifically addresses issues related to environmental governance and natural resource management. This option, which is still being tested by UNCDF (see Insets 9 and 10), should be favoured in situations where ecosystems are particularly degraded and natural resources fragile, and/or where local people are unlikely to prioritize direct investment in the environment due to poverty levels and lack of basic social services and infrastructure.

5.3 LOCAL ENVIRONMENTAL FUND

In the short-term, environmental investment is directly intended to increase the productivity of the land and its renewable natural resources (water, soils, grazing lands, livestock, forests, woodlands, halieutic resources), and to improve the sustainability of natural resource management (see Inset 9).

In the longer term, the allocation of specific financial resources to local governments ultimately aims to promote innovative ways of devolving environmental powers, management responsibilities and significant financial resources to democratic and accountable local institutions.

The aim of environmental funds is to support initiatives generating broader social and collective benefits and externalities, and to:

- Build the capacities of local stakeholders in defining, planning and implementing their environmental priorities and reversing local trends towards poverty;

INSET 9: SUPPORT FOR LOCAL ENVIRONMENTAL GOVERNANCE IN MALI

In Mali, the UNCDF *Support to Rural Communes in Mopti project* provides 107 *communes* in the Mopti Region with comprehensive institutional and financial support. The project covers a total population of about 1,300,000 persons. Despite its enormous potential, Mopti is considered the poorest region in Mali because of its fragile environment and vulnerability to recurrent ecological crises.

The project provides local governments with a financial facility aimed at supporting their funding budgets for rural development and poverty reduction, which include agricultural and livestock production and water management initiatives. Since it began in 2002, the project has earmarked almost 4.8 million US dollars for local governments in Mopti (the fund is channelled through a national institution, the Agence Nationale d'Investissement des Collectivités Locales, ANICT).

The project is also testing a pilot action that provides local governments with targeted funds (*environmental* or *green windows*) for investments related to the conservation, protection and management of natural resources. The objective of the 'Support to Local Environmental Governance Fund' initiative (*Fonds d'Appui à la Gouvernance Environnementale Locale, FAGEL*) is to complement the local development fund and focus on environmental investments. For the initial phase, the fund is made available to a limited number of rural *communes* whose natural resources are particularly threatened and whose environmental problems have severe social and economic impacts.

The agricultural and environmental initiatives funded by FAGEL:

- Conform to national and regional agricultural guidelines and environmental regulations;
- Are within the scope of local government;
- Correspond to the technical and managerial capacities of local communities and user groups;
- Have a comparative advantage and are not already carried out by other projects supported by the government and/or other donors.

- Make a technical contribution to the definition of efficient, sustainable use and management of natural resources;
- Promote the adoption of best environmental practices for efficient, sustainable use and management of natural resources.

Local governments and communities are only eligible for environmental funding if they meet certain minimum conditions. These are defined according to each context, and essentially concern local capacities for environmental planning and management.

As funds are allocated according to annual ceilings, local governments are only funded if their performance over the previous year is evaluated positively. In order to access environmental funds, local governments and communities make an initial contribution towards capital costs (if possible) and/or recurrent costs.

5.4 ENVIRONMENTAL PLANNING MECHANISMS

The environmental planning systems adopted by LDPs should promote bottom-up communication mechanisms that can voice the concerns of local governments and communities and influence regional and national policy orientations. However, in order to determine their own environmental priorities, local authorities not only have to take account of the environmental strategies assessed at the higher level of local government and technical departments, but also the survival priorities of local user groups (see Inset 11).

Environmental planning utilizes participatory mechanisms aimed at involving all local stakeholders, including the poorest, in the decision-making and implementation process. Drawing from lessons learned from existing experiments, Inset 12 below presents the basic step-by-step procedures of the bottom-up planning mechanism, highlighting the three following elements:

- Representatives from villages in a particular sub-district participate in an initial planning exercise aimed at identifying major strategic areas for local development and sustainable use of natural resources;
- Individual environmental micro-projects that conform to the general environmental strategy of the sub-district are then identified

INSET 10: AGRICULTURE AND ENVIRONMENT FUND IN ETHIOPIA

In Ethiopia, UNCDF finances the Adi Arkay Sustainable Development Project (SDP) in North Gonder Administrative zone, Amhara state. The project covers the 32 Kebele sub-districts of the Adi Arkay Woreda, which have a population of about 137,000 inhabitants. The main development objective of the SDP is to improve local livelihoods on a sustainable basis; one of its three objectives is to enhance the productivity and sustainability of natural resource management and land use systems.

The project was formulated on the basis of various studies, including a complete environmental study prepared by a researcher at the Swiss Centre for Development and Environment (CDE), *Reconciling Conservation with Sustainable Development*.²³⁴ During its first year the SDP commissioned a comprehensive study analysing the major socio-economic and physical features of the project area,²³⁵ and supported ARARI, a local research institution, in agronomic research and tests.

The results of these assessments clearly demonstrated that rural poverty in Adi Arkay Woreda is directly linked to low agricultural productivity, low incomes, scarce and degraded natural resources, insufficient assets, lack of services and infrastructure, and lack of adequate technologies. Another contributing factor was the scant involvement of user groups in planning and decision-making.

It was imperative to address the complex issues related to institutional development and environmental governance, as well as production activities, land use and sustainable management of renewable natural resources by local stakeholders. The project created the Kebele Agriculture and Environment Fund (KAEF), a separate funding facility of about \$1 million (another facility, the 'Woreda Development Fund', WDF, was for social infrastructure). The KAEF was a specific funding mechanism that would allow Kebele local government to invest in improving the productivity of the land and its renewable natural resources (water, soils, grazing lands, forests, woodlands, etc.), and sustainable natural resource management.

The approach adopted by the project aims to promote innovation in the devolution of environmental powers, management responsibilities and significant financial resources to democratic and accountable local institutions.

and designed in a participatory manner by local communities and user groups, and are appraised by technical committees at sub-district level. The full participation of all local stakeholders in the design of micro-projects and decision-making will lead to technological choices that match local preferences, respond to local demand and correspond to local survival priorities;

- Once appraised, micro-projects are integrated into a coherent natural resource management plan or the environmental section of a local development plan, which contain the main findings of environmental assessments, strategies and activities.

Through LDPs, local governments should be provided with specific incentives to encourage them to:

- Make significant investments in common property resources (grazing lands, forests, halieutic resources, crop residues, inland waterways, seasonal ponds, etc.), because of their important role in producing food, fuel, fodder, construction materials, products for market, etc. This will entail simultaneously promoting the establishment and/or consolidation of collective management rules. (Inset 13 gives examples of environmental investments made at sub-district level);
- Pay special attention to micro-projects identified and managed by women's groups and minority groups (such as pastoral and fishing communities);
- Provide direct support to new economic opportunities (especially those related to non-agricultural revenues, diversified rural employment, vocational training, etc.) aimed at helping the poorest groups without access to quality productive resources. These new opportunities will have a significant positive environmental impact, by reducing pressure from producers on productive natural resources .

LDPs should aid the development of comprehensive systems for monitoring and evaluating environmental governance by local governments, through the use of specific indicators (Inset 14 provides some examples of pertinent indicators).

INSET 11: ENVIRONMENTAL ASSESSMENTS IN MALI

A socio-economic and environmental study conducted by the Mopti Support to Rural Communes project in Mali focused on the problems related to livestock mobility within the area and between it and other areas. This issue tops the agenda of local authorities and stakeholders because of the fragility of the river environment in the inner delta of the Niger river (despite its huge potential) and the gravity of conflicts over use of the same resources by different user groups (farming, pastoral and fishing communities). A study assessing local production systems proposed four main orientations for a coherent environmental strategy: (i) implementation and management of agro-sylvo-pastoral investments; (ii) prevention and resolution of land-related conflicts; (iii) decentralized governance; and (iv) institutional development.

The results of the study were presented and discussed at a number of local and regional forums, which were attended by local authorities, representatives of technical departments and members of local civil society associations. The participation of the jowro was particularly important, since these customary leaders have been in charge of establishing and enforcing rules regarding seasonal livestock movements in the area since the 19th century Dina Empire. During these forums participants identified a number of measures that would form part of a coherent environmental action plan. Through its specific green window (see Inset 9) the project supports environmental investments in a number of communes with particularly vulnerable natural resources.

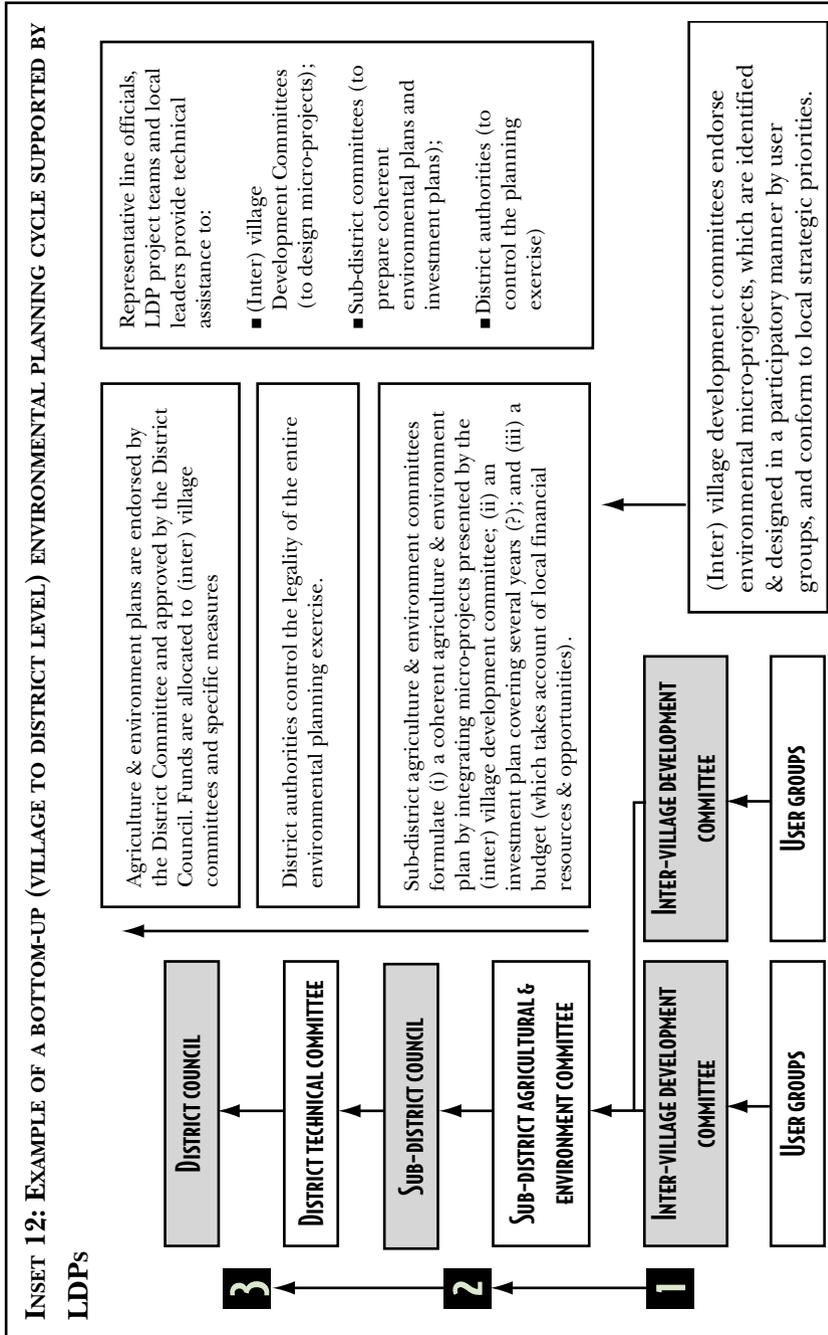
The Timbuktu Support to Rural Communes Project, which began in 1998, covers 21 communes with a population of about 230,000 persons. In 2001, an environmental study commissioned²³⁶ by the project warned that ecosystems in the administrative Districts of Timbuktu, Gourma Rharous and Dire (the zone covered by the project) were in a state of advanced degradation, and that local agro-pastoral and pastoral communities (some 250,000 persons) were particularly vulnerable. In addition to investment related to social services and collective infrastructure, the study recommended the integration of environmental measures into local development plans.

Having identified particularly fragile lands and ecosystems, the Timbuktu study recommended a number of measures to protect their resources and biodiversity and strengthen the environmental capacities of local actors. While individual communes integrated some of these measures into their local development plans, the project faced the challenge of establishing an institutional framework involving two or more communes in the management of common natural resources. Once Malian laws provide clearer institutional orientations, the project ultimately plans to create a local inter-governmental environmental fund, whereby individual communes would be able to freely join larger horizontal institutional frameworks (inter-communalité) without losing their autonomy.

According to the principle of *subsidiarity*, each institutional level (district, sub-district and village) should undertake specific environmental activities:

- At sub-district level, specific environmental initiatives will be designed and implemented (Inset 13 gives examples of sub-district level activities);
- At the level of village communities (including nomadic pastoralist units) and user groups, collective environmental micro-projects will involve different water management and anti-erosion measures, fertility management, protection and management of forest and grazing areas, agricultural intensification and livestock production (see examples in Annexes 1 and 2).

Finally, it should also be emphasized that LDPs should be used to support new aspects of spatial planning that acknowledge the linkages between rural and urban development.²³⁷ The assumption is that there are clear synergies between, and opportunities for, investment in small urban centres and sustainable development in rural areas, and that some pro-poor investment in intermediate rural towns (job creation, training programmes, etc.) could have a direct impact by reducing pressure on the use of local natural resources.



INSET 13: EXAMPLES OF ENVIRONMENTAL INVESTMENTS AT SUB-DISTRICT (COMMUNE) LEVEL

The following major initiatives can be undertaken at sub-district level:

- Protection and management of watersheds;
- Rehabilitation of lakes, ponds or large springs;
- Reafforestation and management of large forest zones;
- Construction and/or maintenance of rural trails or cattle walks/livestock corridors linking several villages;
- Establishment of self-managed rural markets;
- Production and/or updating of comprehensive communal land ownership maps and establishment of simplified cadastral registers (showing all natural resources);
- Promotion of decentralized farmer-based seed enterprises;
- Community-based system for supplying improved seeds;
- Provision of ad hoc and temporary subsidies to stimulate the use of fertilizers in areas of high soil nutrient mining;
- Direct distribution of seeds to farmers in areas without commercial seed markets (to improve the traditional system of seed supply).

INSET 14: KEY PERFORMANCE INDICATORS FOR LOCAL ENVIRONMENTAL GOVERNANCE

a) Institutions concerned with local planning and budgeting

- % of elected members of local councils capable of explaining basic environmental regulations and laws;
- % of local governments capable of carrying out basic, participatory assessments of local environmental problems;
- % of local governments capable of formulating/updating environmental plans;
- % of annual budget allocated by local governments to environmental initiatives;
- % of local governments capable of consistently reducing the period of time between approval and implementation of environmental plans/projects;
- % of environmental micro-projects/initiatives approved by local government that have been endorsed by deconcentrated technical services (i.e. projects that conform to national/regional environmental standards);
- % of environmental projects prepared by a (sub)district in cooperation with other neighbouring (sub)districts.

b) Local regulatory frameworks

- % of by-laws promulgated by local government that specifically address environmental issues;
- % of local governments that have specifically assisted clusters of village organizations in defining, implementing and enforcing rules regarding access to and use of common property resources;
- % of environmental micro-projects included in local annual investment plans that are designed and implemented by women's groups;
- % of village communities and/or user groups within the

(sub)district jurisdiction capable of directly executing environmental micro-projects;

- Decrease in the encroachment of cultivated areas into common property grazing areas and/or forests within the jurisdiction of the (sub) district (based on the results of preliminary environmental assessments).

c) Technologies

- % of local governments that have prepared a ‘minimum package’ of technical measures regarding the protection/rehabilitation/management of the environment that are considered appropriate for local ecosystems;
- % of basic agricultural and environmental technologies (from the ‘minimum package’) adopted by village communities and/or user groups located within the (sub)district jurisdiction;
- % of micro-projects approved by local governments that do not have positive environmental impacts.

d) Poverty

- % of households whose food insecurity during the ‘hungry period’ was reduced as a result of specific local government investment in the resource base (based on preliminary assessments);
- % of micro-projects that specifically address the environmental needs and problems of women and minority and marginal user groups (pastoralists and fishing communities; groups considered as low caste, etc);
- % of local governments that have specifically adopted procedures concerning the elimination of legal discrimination (e.g., tenancy agreements, regulations regarding the inheritance of land, etc.) against marginal user groups and minorities (this indicator is based on the results of preliminary assessments);
- % of land use-related conflicts resolved at local level by organs supervised by local government, and not brought to civil justice.



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Conclusion

CHAPTER 6 The way forward

MDGs AND THE ENVIRONMENT: THEIR LIMITATIONS AND POTENTIAL

In order to achieve the Millennium Development Goal (MDG) of halving poverty by 2015, management of the resources on which the poor depend will have to be improved.

However, only one of the eight MDGS directly refers to the environment and natural resource management. This is the seventh MDG which aims to “ensure environmental sustainability”. This goal has three targets, to:

- ‘Integrate the principle of sustainable development into country policies and programmes and reverse the loss of environmental resources’ (Target 9);
- ‘Halve by 2015 the proportion of people without access to safe drinking water and sanitation’ (Target 10);
- ‘By 2020 to have achieved significant improvement in the lives of at least 100 million dwellers’ (Target 11).

These targets have seven different indicators, of which only two deal specifically with resource conservation:

- ‘Proportion of land area covered by forest’ (Indicator 25);
- ‘Ratio of area protected to maintain biological diversity to surface area’ (Indicator 26).

One observer recently noted that the problem with these goals, targets and indicators²³⁸ is their narrow focus on quantity: they concentrate on the amount of land involved while ignoring the quality of natural resources within these areas and their management and governance regimes, as well as the land and resource rights of people living in and around them. Also, they are too concerned with measurable outcomes and neglect impacts that are not easily measured (such as accountabil-

ity for environmental governance, protecting the civil rights of poorer groups, etc.).²³⁹

Another limitation is their lack of concern about the ‘losers’ and ‘winners’ in forest management, especially in terms of the disproportionate costs borne by the poor, who are evicted from their lands, while national governments and the private sector derive considerable financial benefits from tourism and hunting. Protected areas are all too often associated with forced displacement and loss of access to natural resources for the people living in and around them, and their creation has often been a major factor in increasing poverty among the poorest of the poor.²⁴⁰

The focus on ‘forests’ is also very restrictive, since it includes natural forests and forest plantations but excludes agro-forestry and neglects other productive resources, such as agricultural lands, grazing areas, wetlands or marine resources. This is highly surprising, given the fact that a large majority of the poor are more dependent on these resources for their subsistence (in terms of food security) and production than they are on protected areas and forests. Meanwhile, the notion of ‘protected areas’ (which unfortunately usually conjures up images of fences, fines and paramilitary enforcement) only applies to officially recognized national parks, wildlife reserves or biosphere reserves (i.e., areas recognized by central governments and international organizations), and not to customary buffer areas or zones protected by local community management regimes.²⁴¹ This not only means that all the arguments stressing the importance of community-based natural resource management and the environmental role of legitimate local authorities are somehow disregarded, but also that attainment of the seventh MDG may well reinforce traditional, state-controlled, top-down and protectionist approaches.

However, MDGs should be seen in a broader context. As senior UNDP management clearly stated while setting and framing the development agenda, MDGs do not in themselves provide action plans for progress, but provide a shared framework for such plans.²⁴² Despite their limitations, their strength lies in their ability to establish an overall framework, their unprecedented specification of a precise range of goals and targets, and their recognition that most are interconnected.²⁴³

UNCDF: LOCALIZING THE MDGs

UNCDF is fully committed to working towards sustainable livelihoods, lasting progress in poverty reduction and attainment of the MDGs. It stresses the role of the processes that will be used to attain the MDGs and the means through which they will be achieved, with particular emphasis on the importance of good environmental governance parameters. This will be done by adopting a comprehensive approach that will:

- Help provide local governments with sufficient authority and adequate financial resources to achieve local environmental goals and efficiency;
- Establish interactive links between local institutions and technical and socio-economic demands;
- Advocate procedures and mechanisms that respect the rights and interests of all local stakeholders, including the right to participate in environmental decision-making;
- Consolidate potential technical initiatives into a viable institutional framework and support governance structures built on traditional values and local social capital;
- Support the definition and use of more qualitative indicators for resource conservation that better reflect local perceptions and priorities;
- Ensure that conservation practices contribute to the well-being of local communities and legitimate local authorities.

By supporting local environmental governance, UNCDF stresses the importance of not only including poverty reduction concerns in the seventh MDG, but also of fully integrating environmental concerns into every MDG and avoiding the risk of relegating them to just one of the eight MDGs. Environmental sustainability, poverty reduction and food insecurity are particularly interdependent.

Furthermore, through its LDPs, UNCDF stresses the crucial role of competent, transparent, efficient and accountable local governments in achieving many of the MDGs. Along with a growing number of other donors, UNCDF supports a wide range of local mechanisms, from decision-making to monitoring and evaluation and data collection.

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Natural resources can make a significant contribution to sustainable growth and poverty reduction when they are properly managed through community-based mechanisms and with the support of legitimate local governments.

If they are based on broad consultations with local communities (that include marginalized groups like pastoralists or indigenous groups) and reflect local values, NRM-related interventions can form an essential part of a sustainable process of poverty reduction, since improved productivity will directly increase rural livelihoods, food security and market participation.

CHALLENGES AHEAD

It has already been noted that the UNCDF environmental policy based on local environmental governance is still relatively new, and that it faces enormous challenges. While new internal procedures and parameters are needed for the overall cycle of project formulation and implementation, the success of new environmental initiatives will ultimately depend on the following overlapping processes:

- A democratic decentralization process that defines local governments' legitimacy and legal competency to formulate environmental policies and carry out sustainable measures;
- Political decentralization involving the effective transfer of environmental powers from central to local government;
- Fiscal decentralization involving the transfer of significant environmentally-targeted financial resources to the local level;
- The emergence of a civil society favouring the involvement of citizens, their organizations (including NGOs) and the private sector in local mobilization and environmental education.

Local mechanisms for good environmental governance will increase awareness of the importance of environmental issues, enhance local responsibilities and accountability, and strengthen a democratic culture. This will potentially lead to productive ways of managing natural resources, improving the productivity of local rural economies and increasing economic growth.

Promoting opportunity is a key part of poverty reduction - by stimulating economic growth, improving sustainable use of natural resources, making markets work better for poor people and building up their assets. LDPs will assert that there is no trade-off between measures aimed at poverty reduction and those aimed at protecting the environment.

The impact of decentralization on NRM is another critically important issue. Increasing the participation of local stakeholders in decision-making should create opportunities for broader institutional change, increase democratization and give civil society a greater voice. However, there is evidence to suggest that decentralization may not necessarily lead to pro-poor outcomes: that it may, on the contrary, make it easier for local elites to capture power and act against genuine poverty reduction. In order to achieve its decentralization objectives it is essential that the arrangements governing the implementation of DNRM are clearly established; they must ensure that the transfer of environmental authority is accompanied by specific financial instruments and precise accountability measures, such as adequate information for local populations and a greater role for civil society organizations.

Finally, by supporting an integrated and holistic approach to DNRM, UNCDF will mainstream environmental issues into broader development programmes at local, national and international levels, enhance political commitment for a participatory '*bottom-up*' paradigm in NRM, and facilitate transmission of the results of its projects to decision-makers and other participants in development.

Through improved environmental governance and natural resource management, a new generation of projects will better reflect UNCDF's commitment to poverty reduction and to meeting many of the Millennium Development Goals. The challenge is to tap into local potential - social and human capital, technical know-how, and coping and adaptive strategies - and create enabling environments that promote the participation of the poor in decision-making.

Annex I: Sustainable technologies to support local economies and poverty reduction

In order to provide effective support to local economies, LDPs will increase the capacity of local government bodies to access adequate information about sustainable land use-related technology, for planning and implementing measures to support local economies, improve the productivity of the resource base, and induce better land conservation practices. UNCDF fully shares the opinion expressed by the IFAD's Report on Poverty 2001 that "unless the poor have the power to participate in decisions which determine their use of technology, they will be unlikely to benefit from its implementation."²⁴⁴

Through support to environmental planning and provision of environmental funds to local governments, LDPs will promote the dissemination and will facilitate the adoption of a wide range of sound practices and techniques for effective management of the natural resources on which productive activities (agriculture, livestock, forestry, fishing, etc.) depend. By taking into account the results of recent research which highlight the low rates of adoption of sustainable resource management strategies especially among the smallholder producers,²⁴⁵ LDPs will focus on the wide range of external factors preventing farmers from adopting these strategies.

The following sections provide examples of major technical investments which are dealt with by UNCDF-supported projects.

MAKING MAJOR TECHNICAL INVESTMENTS TOWARDS A HOLISTIC APPROACH

Water supplies and water resource management

Water management will be considered as a crucial element in NRM activities, as water is a key limiting resource in drylands and the new threats and challenges of water resources have profound impacts on local livelihoods.

Efficient water programmes should provide an adequate supply of clean potable water for human use, sufficient water for livestock production and, if possible, water to allow supplementary food crop or forage production. The creation of infrastructures (new water points) will take into account ecological factors (so as not to contribute to environmental degradation), land use issues (existing patterns of access to and use of productive resources), and issues of equity (water infrastructures may allow some groups to control other productive resources – e.g., grazing areas - at the expense of other users). LDPs will increasingly encourage the planning for the establishment of adequate water supplies, especially in areas where natural resources are under-exploited and where farmers and pastoralists face urgent needs.

Water management techniques are capable of reducing water erosion, maximizing the infiltration of water into the ground, improving the implementation of agricultural production activities, and ultimately improving production – for both local consumption and the market. The management of irrigated areas can be improved through measures aimed at promoting good agronomic practices.

Preference will be given to micro-projects (check dams, small water catchments, spring protection and rehabilitation, well, etc.). Small works have the advantage of being better managed and controlled by local government bodies and/or local communities and are also capable of reducing the effects of water run-off, diminishing erosion, preserving moisture, protecting soils, and making it possible to recover irrigable lands rapidly and promote the infiltration of water for irrigated crops.

Watershed management

LDPs will focus only on watershed²⁴⁶ management activities in high-potential upper catchments, as well as marginal uplands and remote catchment headwaters, where isolated and poor populations often live. Watershed management comprises at least two aspects:

- Management of local development by local governments: this includes the ability of local governments to extract compensation for the ‘environmental services’ they can provide;
- Management of natural resources by residents communities: a special focus will be placed on upstream-downstream hydrological

relationships (including the problems of high cost externalities, such as the sediments deposited behind dams and in canals from hill farming).

Soil fertility

LDPs will also support the dissemination of successfully tested practices for stopping the degradation of soils (usually caused by erosion, buildup of salts, etc.) and for maintaining soil fertility. In accordance with current agronomic knowledge, the general problem of fertility²⁴⁷ refers not only to the intrinsic characteristics of the soil, but also to the overall functioning of the biological system (that is, the soil, along with plants and the climate) under the impact of technical interventions by producers.

From this perspective, the problems of plant nutrition should be understood in conjunction with other factors (for example, water resources, the fight against weeds and diseases, effective methods of tillage, and cultural practices). Thus, improving soil resources should be a technical priority, whereas controlling soil erosion should only be considered as the direct result of improved management practices. The impact of soil fertility practices will be measured by the yields of main crops and rangelands, and changes in the soil's nutritive elements (particularly in terms of enhanced carbon storage capacity of the soils and vegetation).

The following major practices will be supported:²⁴⁸

- Maximization of soil moisture retention and utilization (through 'land husbandry' techniques);²⁴⁹
- Higher use of mineral fertilizers as well as improved managed deposition of nutrients (through, for instance, composting, manuring, mulching, etc.) and fixation (through, for instance, improved fallow rotations and intercropping);²⁵⁰
- Temporary closure of areas to protect and rehabilitate vegetation and soil through natural regeneration;
- Regeneration of forage in degraded lands;
- Improvement of pastures, through the introduction of better forage species, moisture conservation, removal of unpalatable species,

cutting of shrubs, regular weeding and maintenance of fertilization, etc.;

- Adoption of already tested packages, which do work, but are still considered risky and for which, therefore, limited subsidized funding is justified;
- Land reclamation measures, i.e., measures aimed at recuperating the loss of land (because of erosion, salinity, etc.): labour-intensive reclamation techniques are better fitted to poor households, such as: earth or stone contour bunds; water harvesting; digging and refilling pits; and planting appropriate vegetative erosion barriers or species that can compete successfully with the thorn acacia which otherwise makes the areas ungrazable.²⁵¹

Anti-erosive measures

In the area of anti-erosion measures, LDPs will promote an approach that is essentially oriented towards production.

Lessons learned from previous projects reveal that, in the absence of improvements in land husbandry, investments in physical structures are unlikely to be sustainable. Thus, the top priority will be the improvement of soil resources - by focusing, for instance, on higher yields, and reduced impact of water runoff - whereas controlling soil erosion will only be considered as the direct result of improved management practices.

Another justification for this approach is the associated economic incentive to the small rural producer, who commonly is motivated to change only if they perceive immediate benefits and improvements to their livelihood.

LDPs will support the idea that the best anti-erosion measures at the disposal of farmers is the maintenance of an effective plant cover on the ground for most of the crop growing season (rainfall season); this entails a certain combination of perennial crops and of annual tillage crops (see Annexes 1 and 2).

In specific ecological environments, LDPs should also emphasize the role of agro-forestry in some forms of plant combinations as well as the importance of practices that add organic matter to soil, conserve soil (prevent erosion) and help water retention (e.g., bunds, tied ridges,

terraces), increase productivity by raising soil moisture levels and the benefits of fertilizers (inorganic fertilizers should be considered as an element in a range of land management practices, and not as a solution in themselves).

Specific indicators related, for instance, to crop yields and availability of well water, will measure the impact of anti-erosion initiatives.

Agricultural intensification

LDPs will strongly emphasize the importance of strategies for agricultural intensification as a way to improve the productivity of farming land without expanding the area under cultivation. Intensification will be expressed not only in terms of productivity per unit of land exploited, but above all (based on the logic of peasant farmers) in terms of the levels of production per work unit (or returns to the labor power of the poor). Several techniques and practices will be disseminated.

Agricultural intensification should particularly lead to the adoption of crop production strategies that are capable of ensuring sustained, stabilized production, minimizing risks, and maximizing productivity per work unit rather than per unit of land; and to the optimal use of water at critical stages of plan development, in order to reduce risks.

In soil fertility matters, LDPs will support an integrated management of nutritive elements, combining organic and mineral methods of fertilizing soils with physical and biological measures for soil and water conservation, based on the specific characteristics of each site. This integrated method, which makes maximum use of local organic matter, fully exploits non-organic matter, and reduces losses in the nutritive elements in plants, is advocated more and more by the international agronomic research centers. In certain cases, the use of fertilizer subsidies should not be entirely ruled out as a short-term measure (in spite of pertinent questions concerning sustainability, these subsidies could help producers to escape from an evil cycle of high fertilizer prices, low demand, and consequently high unit costs in the marketing of the input).²⁵²

Livestock production and health

Livestock is of crucial importance in the management of natural resources, especially in the drylands, by generating income, providing food,

BEST AGRICULTURAL PRACTICES

Among the best agricultural practices supported by LDPs are the following:

- Support for the sustained development of rainfed agriculture;
- Support for small-scale irrigation (by means of the construction and/or rehabilitation of water infrastructures and irrigation systems);
- Development and intensification of basic food crops (drought-resistant, early-maturing food crop varieties with high nutritional value);
- Use of multiple cereal strains that are adapted to the production objectives of poor rural populations. Choices should take into account: length of cycle crops; resistance of strains to arid and semi-arid conditions and to some predictable risks (e.g. striga infestations); capacity of strains to produce relatively large quantities of agricultural by-products (stems, leaves, bran, etc.) for animal food, etc.;
- Adoption of phytosanitary control measures to attenuate the impact of pests on crops (this will require the parallel implementation of measures for supplying phytosanitary products and equipment). Integrated biological control strategies may combine several measures (use of resistant plant varieties, adaptation of seasonal time sequence of crops, production and/or introduction of natural bio-control agents, crop combinations, bio-pesticides and limited use of synthetic pesticides, integrated control methods for striga and other field pests and diseases);
- Improvement of seed varieties as a key factor to increase agricultural productivity, yields and food security: according to the findings of recent research, seed, together with environment, determines the upper limit of crop yields and the productivity of all other agricultural inputs to the farming system;
- Improvement of grain storage methods;
- Appropriate use of subsidies allowing small-scale producers to purchase equipment and basic agricultural inputs (in order to facilitate more intensive crop production techniques);

- Adoption of conservation agriculture techniques, that is farming methods aiming at making more efficient use of the soil, water and biological resources (through recycling and restoration of soil nutrients and organic matter and better use of biomass, moisture and nutrients);
- Implementation and improvement of practices and techniques founded on local know-how and traditional technical skills. For instance: selective option of fallow lands; crop rotation and crop combinations (especially cereals and leguminous crops); cultivation of larger areas of land (in zones with average rainfall); use of animal-drawn cultivation; addition of fully decomposed animal manure; adoption of appropriate practices for soil fertility management; phytosanitary treatments for plants; agro-forestry; development of small irrigated surfaces; etc.

labour (draft power), being an asset to reduce vulnerability to recurrent crises and a social capital allowing societies to reproduce themselves.

LDPs will promote strategies aimed at increasing not only the weight of the animal carcass for marketing purposes, but also at seeking an overall balance between animal resources and ecological resources. In this area, the strategies should, above all, take into account the constraints and relative potential of different agro-ecological zones.

In arid and semi-arid areas (with an annual rainfall that is less than 400-450 mm), a dynamic, non-equilibrium vision of the environment should essentially:

- protect crucial coping strategies (for example, the seasonal mobility of livestock between different agro-ecological areas);
- promote appropriate regulations to manage grazing lands²⁵³ within herders' associations (for example, define 'enclosed grazing areas' and 'buffer zones');
- define and implement sustainable and economically feasible initiatives for rehabilitating grazing lands (sowing pastures, controlling vegetation, etc.);

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- promote the setting up of spaces for consensus-building between groups of stockbreeders to coordinate the seasonal movements of herds;
- promote, as a complement to the notion of ‘village land/terroir villageois’, the notion of a ‘gathering zone’ for pastoral groups moving to fresh pastures, and to set up the services and infrastructures that they need;
- promote the concept of ‘integrated resource development’, namely a technical and legal tool capable of incorporating and integrating agricultural, pastoral, animal, plant, and water dynamics.

In these areas, investment in the development of pastoralism is justified by:

- economic factors: in land with less than 350 mm annual rainfall, where agriculture is too risky, pastoralism is the only productive way of using the resources; the social cost of ‘not taking’ action would be high (risk of civil unrest);
- political considerations: pastoral groups live in areas often characterized by social unrest, and the cost of ‘not taking’ action could be very high;
- social criteria: poverty is widespread in the areas inhabited by nomadic pastoralists, especially in terms of lack of basic services and infrastructures.

However, in semi-arid zones that are already relatively densely populated, when developing livestock-oriented activities of sedentary populations, it is necessary to take into account the potential destabilizing effects on existing fodder resources and on potential conflicts with populations of transhumant pastoralists. Overgrazing phenomena, often created by the chaotic multiplication of public water points, can indeed break down the environment and lead to considerable social tensions;

- In wetter zones, (with an annual rainfall greater than 400-450 mm), recent research has found that soil fertility problems are more limiting to crop than water deficiency and that up to 40 per cent of farmers’ income is accounted for by mining of soil nutrients.²⁵⁴ These zones are characterized by economic precariousness and

ecological fragility, LDPs will resolutely support agro-pastoralism – that is the simultaneous, integrated practice of agriculture and animal breeding and a stronger integration between crop and livestock production, in order to reinforce the survival strategies of local populations and diminish their vulnerability in crises. In certain areas, for instance in the Ethiopian Highlands, crop residues may provide as much as 90 per cent of the livestock feed. But LDPs must also take greater account of new problems arising from this interrelationship, in a context where the annual production of the biomass is insufficient to meet both the food and energy needs of the populations and the fodder needs of the animals. Specific technical measures should effectively promote the complementarity, rather than a simple association, between agriculture and livestock activities;²⁵⁵

- In all zones without distinction, LDPs will emphasize the linkages between basic animal health and animal nutrition²⁵⁶, and also the concrete benefits to household food security of sound forms of pastoral resource management.

Rangelands

Range management include all aspects of land and livestock tenure and some aspects of herd management, as well as the detailed manipulation of the vegetation to increase its productivity.²⁵⁷ According to this broad definition, a number of range management measures may rise or maintain the quality of natural resources:

- Allocating the use of land to grazing;
- Maintaining and improving the productivity of the rangelands (essentially forage, but also fuel, gum, minerals, etc.), by mechanical or physical work, planting;, application of chemicals, but also by altering the time, length and succession of use (rotation of grazing) by livestock of particular land and regulating grazing pressure in terms of numbers, species, and movement of animals
- Developing water supplies (wells, boreholes, ponds, etc.) to increase the land available for grazing;

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- Restoring soil humus through the application of composts, crop rotation, fallow systems, etc.
- Adopting technique aimed at improving herd management and animal husbandry;
- Creating vegetative barriers against erosion

It has been pointed out that poor farmers are likely to adopt these techniques if their opportunity costs are low and if they are also productive (anti-erosion barriers, for instance, with shrubs providing fodder for livestock).

Agricultural and non-agricultural activities

LDPs will strengthen the capacity of rural populations to diversify their economy and undertake income-generating activities. For rural households, who face recurrent ecological and economic crises, the diversification of income strategies is a major survival strategy.

Households have four diversification strategies: (i) employment on other local farms; (ii) migration (in search for employment); (iii) self-employment in a rural non-agricultural activity; and (iv) employment with others' non agricultural activities.²⁵⁸

The use of these alternatives contribute not only to generate income for increase food security, but also to reduce the pressure on natural resources, thereby improving local livelihoods as well as halting biodiversity losses.

For poor rural households, non-agricultural activities (such as handicraft, services, petty trade, etc.) contribute in a significant way to decrease vulnerability vis-à-vis food crises and procure essential goods and services. However, studies in Niger and in Kenya, for instance, have found that these activities can also constitute the take-off for an accumulation and an increase of the productivity in agricultural production.²⁵⁹

Other appropriate investments

LDPs will also be able to promote initiatives in other areas, namely:

- **Forestry:** Forests, with their products, may have a major role in poverty reduction and economic growth. However, they have to

be integrated into sustainable economic development (in the past, governance failures and perverse incentives have often seriously undervalued them).²⁶⁰ Measures aimed at creating village nurseries and producing plantations of local vegetable species; as well as measures aimed at protecting and rehabilitating forests where fruit, vegetables, and medicinal plants are gathered, firewood and construction materials are harvested, and small game is hunted;

- **Fish farming:** Major initiatives will foster training initiatives for producers and measures aimed at stocking pools and watercourses;
- **Eco-tourism:** Investment may include promotion of quality handi-craft products and setting up of marketing circuits, support for creating and operating quality ‘country lodges’ and ecological ‘farms’ managed by local communities, etc. Traditionally, tourism development has depended on initiatives taken by the private sector. In many countries local authorities have little experience of its planning, development and management. But, in recent years this has been changing, and the key role of local authorities is now recognized. Under the supervision of local authorities, eco-tourism should include including spatial planning, development control, environmental management and community services.²⁶¹
- **Wildlife management:** The objective of participatory community wildlife management is to ensure conservation of wildlife resources, while promoting the economic and social development of local communities through the use of wildlife resources.
- **Biodiversity:** As it refers to the vast array of animals and plants and the dynamic communities they form, biodiversity permeates all levels of NRM, as its individual elements interact to form forests and grasslands, maintain soils, and provide ecosystem services.²⁶² For LDPs, biodiversity concerns should inform all NRM-related interventions. Special programmes will enhance the awareness of local stakeholders on this crucial issue.

CONCLUSION

Poor users are likely to adopt and undertake long-term, environmentally sound economic actions - including resource management that ensures continued productivity - only if they believe that market incentives and critical resources are likely to remain available long enough to realize a profit.²⁶³ When their very survival is at stake, the poor are unlikely to be attracted by techniques which are purely aimed at conserving the environment.

As the majority of LDPs are carried out in poor or very poor areas, it is imperative that the technologies they support be well suited for farming communities with few assets and limited financial opportunities. Poor households with limited liquidity or labour availability, for instance, are likely to reject natural resource investment with significant up-front costs (e.g., terracing, irrigation); techniques with great demands for purchased inputs (including planting materials, fertilizers); or practices requiring large tracts of land (e.g., fallowing).²⁶⁴

Thus, in assisting local stakeholders in planning environmental measures and selecting technical measures, LDPs will disseminate important criteria such as those identified by a IFAD recent report on poverty : greater productivity of output per unit of input; more intensive in terms of labour; optimal adaptation to seasonal labour demand and food needs; resistance to climatic, pest and labour supply risks; great stability in labour use and product-flow across seasons and years.²⁶⁵ Furthermore, LDPs will support NRM measures generating, at least on a medium-term, some income for the users. A basic assumption is that the decisions of poor smallholders, especially those living in drylands, are driven by precise risk-minimizing strategies rather than by income-increasing ones.

Careful attention will be put on the environmental and economic sustainability of the various NRM activities, whose objective will be to conserve or enhance the productivity of the resource-base and to maintain minimal levels of resource expenditure over time. By doing so, local governments and communities will be assisted in adopting a holistic approach towards the management of the eco-systems (and their different components). These practices are likely to provide a sustainable increase in productivity and to raise the incomes derived from the use of natural resources, as well as to help local communities to cope with adverse shocks and reduce the impact of risks.

Annex II: Best anti-erosion practices

The best anti-erosion practices that LDPs will disseminate are the following:

- **Soil fixation in dunes:** these measures make it possible to combat wind erosion (usually in zones that already have an annual rainfall of less than 500 mm). Generally, two methods are used: (i) mechanical fixation (for example, by means of a latticed arrangement of palm tree rachis) and (ii) biological stabilization (by strewing goat dung, planting rapidly growing species, for example, proprospis, parkinsonia and local species, for example, acacia, balanites, zizyphus);
- **Half-moons:** semi-circles - approximately 6.5 feet (2 m) in radius and 12 inches (30 cm) deep -generally on a slope, are dug perpendicularly to the slope and surrounded by an earth embankment that is also in the form of a semi-circle. The semi-circle is cultivated and is productive on account of the surface water that is collected and stopped by the 'small moon' – it has been estimated that a half-moon can receive 2.5 times as much water as it receives directly;
- **Groynes:** construction of embankments using stone and timber cribs, anchored to the bank and jutting out into the bed of a river (its dimensions depend on the height of the bank , the width of the river bed, and the strength of the current). For a groyne 65 feet (20 m) long, it has been estimated that 2 to 12 weeks of work are needed. This technique makes it possible to protect and reclaim the lands along river banks (for cultivated farm crops);
- **Holes:** traditional method, which consists of digging holes in hard soil approximately 1 foot (30 cm) in diameter and 6 inches (15 cm) deep, placing the crop seed in them, of placing the organic materials there, and stimulating termite activity to break up the underlying soil;
- **Micro-retaining dykes** built into the slopes of a clayey site that is

effective with or without canals for surface water collection, and away from the main paths of gully erosion (digging supplies the excavated earth to build the retaining dyke which is covered in stones). The micro-dykes which can store water for 4 to 6 months are generally used for livestock watering, but also for making bricks or for small-scale irrigation;

- **Management of watersheds:** this covers a number of initiatives aimed at protecting and reclaiming the soil on slopes (by means of small dykes and plant cover) and at protecting the soil in shallow waters against vertical and lateral erosion (by means of stabilizing dykes and of filtering dykes);
- **Earth bunds with stone spillways** are used either to pent up surface waters so that they filter back into the earth and replenish the water table tapped by wells, or to retain the earth and allow the regeneration of grass, shrubs, and bushes. Earth bunds with stone spillways are generally aligned with a water level. The earth bunds are often stabilized by means of grass seeding (e.g. by planting andropogon), although straying by animals makes this difficult, and by planting trees;
- **Introduction of an anti-erosion plant cover** along slopes, using grasses or shrubs with deep roots and strong leaves (possible to use vetiveria on account of its characteristics – fire- and flood-resistant and impervious to livestock or insects).

Annex III: Best practices and techniques in soil fertility management

The best practices for managing soil fertility that LDPs will attempt to disseminate are the following:

- Preparation of manure pits or of compost pits: a manure pit is supplied regularly with manure and plant waste and watered during the dry season (the manure is used as soon as the rainfall season has begun); a compost heap is filled with household waste and also with straw and harvest residue before the rainfall season (the rain enables fermentation to occur throughout the ensuing dry season; watering is not required and the compost can be used at the beginning of the following rainfall season);
- Use of mulch, not so much for supplying nutritive elements as for protecting the ground against erosion, limiting evaporation (and, consequently, retaining humidity), reducing the decomposition rate of organic matter, reducing the excessive temperature of soils), and reducing invasion by weeds (soil humidity is the main limiting principle in agrarian systems in semi-arid zones and, to some extent, in wetter zones);
- Introduction and/or consolidation of different forms of 'crop combinations' including the use of leguminous crops in cereal plots or of crop rotations, which entails planting vegetables after a cereal crop (leguminous crops stimulate nitrogen fixation in the atmosphere, and also supply fodder for livestock);
- Treating crops residues with moderate doses of urea and modifying soils by adding crude phosphate or applying mineral fertilizers in contained areas and/or in split applications;
- Cultivating alternating strips of crops and trees; planting strings of vegetables along contour lines; and the ridging system or ridging in border strips may provide many potential advantages (for example, energy savings, easy weed control, integration of organic matter into the ridge, etc.);

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- Controlled use of seasonal fires ²⁶⁶;
- Burial of crop residues, the use of agricultural by-products (rice bran, peanut shells, lime sludge, etc.), and the use of waste water after lagooning);
- Use of animal-drawn cultivation to facilitate, among other things, the incorporation of animal manure and chemical fertilizers;
- Use of household waste on fields close to cabins;
- Transformation of natural fallow lands into grazed fallow; and improvement of fallow land and feed-grade plots to regenerate the properties of the soil (stable humus content and soil structure) – by means of fire protection, tree planting at the end of the cycle, or use of forage crop plants on fallow lands;
- Housing animals on remote fields;
- Agro-biological soil management entails crop growing systems based on direct seeding in soil that has a permanent plant cover (to improve soil fertility by increasing the biological activity, reducing losses, and improving the recycling of nutritive elements),
- Agro-forestry to integrate trees and shrubs into production systems, for the production of fodder or wood and, above all, to take advantage of their qualities as fertilizers and of their microclimatic effects.



Notes

¹ The term renewable natural resources refers to very different entities or inputs, such as water, soil, grazing lands, forests, woodlands, halieutic resources and wildlife (the term corresponds to the legal concepts of 'natural property', 'natural wealth' or 'assets'). This report does not deal with non-renewable natural resources, such as oil, gas, coal, hydro and geothermal resources. The concept of natural resource management (NRM) designates the direct and indirect ways in which natural resources may be put to productive use.

² According to sources such as the Rural Poverty Report 2001, produced by the International Fund for Agricultural Development (IFAD).

³ The term 'land tenure' covers a wide range of institutional arrangements related to the acquisition and use of land (Cliffe & Lawrence, 1989:6), or a set of laws and customs establishing rights and duties relating to land use (Upton, 1987: 63). Access implies the right to use or benefit from a productive resource. Control refers to the effective exercise of such rights (Berry, 1989: 1). Productive resources may be broadly defined as including both the material and financial means of production – land, labour, fixed and working capital – and the social relations and knowledge that may be employed in the production process (Berry, 1989: 1).

⁴ Cleaver & Schreiber, 1994: 1.

⁵ UNDP, 2003: 123.

⁶ Agenda 21, Chapter 10. 1.

⁷ See UN University at <http://www.unu.edu/env/land/>

⁸ World Bank, 2001a: 15.

⁹ The term 'conservation' designates

measures aimed at preserving or enhancing bio-productivity.

¹⁰ In the context of NRM, the term 'stakeholder' may designate those with access to and control of a specific resource; those with a direct concern in the use of a natural resource by others; and those who try to influence the decisions of others on NRM-related matters.

¹¹ UNCDF, 1995.

¹² Michel & Lazarev, 1997: 25.

¹³ Leach, 1998: 112.

¹⁴ See Grosjean et al., 1998.

¹⁵ Little, quoted in Hobben et al., 1998: 138.

¹⁶ UNCDF, 1998: 27.

¹⁷ UNCDF, 2003.

¹⁸ UNCDF, 2003: 59.

¹⁹ WDR, 2002: 59.

²⁰ The notion of 'biodiversity' or 'biological diversity' includes the variety of life in all its forms, levels and combinations. Three general kinds of biodiversity are distinguished: habitat diversity, genetic diversity and species diversity.

²¹ See, for instance, Leach & Mearns, eds., 1996.

²² Forsyth & Leach, 1998.

²³ See Tiffen et al., 1994; Raynaut, ed., 1997: 380.

²⁴ Behnke, R. & Scoones, I. & Kerven C.,

eds., 1993.

²⁵ NOPA, 1992: 27; Niamir-Fuller, ed., 1999.

²⁶ World Bank, 2001a: 13.

²⁷ Coping strategies deal with short-term insufficiency; adaptive strategies adjust to longer-term changes in the physical or economic environment through changes in production or income generation. (Davies, quoted in Maxwell & Wiebe, 1998: 15).

²⁸ DDC, 2002:8.

²⁹ Veit et al., 1998: 224.

³⁰ See DFIF, 2002: 5.

³¹ The concept of derived or secondary rights refers to the various arrangements that allow people to access and use land resources (leasing, share contracts, tenancy, loans and the like).

³² Economists define 'pastoralism' as a production system in which at least 50% of gross household revenue (including the value of produce for the market and for domestic consumption) comes from livestock or livestock-oriented activities, or where more than 15% of household food energy consumption consists of milk or milk products produced by the household.

³³ Raynaut, ed., 1997: 126.

³⁴ See IFAD, 1992.

³⁵ Bojō & Reddy, quoted in World Bank, 2001a: 145.

³⁶ World Bank, 2001a: 10.

³⁷ DDC, 2002. See <http://www.undp.org/seed/unso/>

³⁸ Two ministries are involved in Niger (Ministry of Agriculture and Livestock, Ministry of Water and Environment); three in Mali (Ministry of State Assets, Land Issues and Habitat, Ministry of Agriculture, Livestock and Fishery, Ministry of Environment); three in Burkina Faso (Ministry of Agriculture, Water and Halieutic Resources, Ministry of Animal Resources, Ministry of Environment and Livelihoods) and three in Chad (Ministry of Agriculture, Ministry of Environment and Water, Ministry of Livestock).

³⁹ WRI, 2003: 14.

⁴⁰ See Sairinen on developed countries such as Finland, quoted in Joas, 2003.

⁴¹ See UNCDF, 2003: 71, 73.

⁴² 'Fragile' lands are lands that are prone to wind and water erosion and soil acidification, and subject to soil nutrient leaching. This term also covers potentially productive land located in inaccessible areas.

⁴³ See, for instance, the conclusion of a study on natural resource management implementation in Zimbabwe (Fuller, 2001).

⁴⁴ NOPA, 1992: 43.

⁴⁵ Balland & Platteau, 1996: 247.

⁴⁶ ARD/RAISE, 2001: 2.

⁴⁷ See Bromley, 1991.

⁴⁸ Cleaver & Schreiber, 1994: 9.

⁴⁹ See Deininger, 2003: xviii.

⁵⁰ Mniwasa & Shauri, 2002. The authors report that customary land tenure was

- formally abolished without payment or compensation to rural people. In the region of Arusha, district councils were then allowed to distribute the land freely.
- ⁵¹ Benjaminsen & Lund, eds., 2001: 14.
- ⁵² World Bank, 2001: 9.
- ⁵³ Raynaut, ed., 1997: 313.
- ⁵⁴ Veit et al., 1998: 233.
- ⁵⁵ See also Balland & Platteau, 1996; Barrett et al., 2000: 19.
- ⁵⁶ Deininger, 2003: xxv.
- ⁵⁷ NOPA, 1992: 43.
- ⁵⁸ World Bank, 2003: 1.
- ⁵⁹ Raynaut, ed., 1997: 290.
- ⁶⁰ UNDP, 2003: 124.
- ⁶¹ Speirs & Olsen, 1992: 61.
- ⁶² 'Multiple resource use' is a central feature of many production systems, and of pastoralism and agro-pastoralism in particular. It typically involves complex combinations of different variables: different categories of user, users of different status, different uses of the same resources, differentials between the productivity of resources, economic value and ease of control, different sets of rights and obligations for resources users (e.g. rights to different uses, for defined time periods or seasons, rights of disposal, rights of occupancy, rights of access or transit, reciprocal rights of access). Cousin, 1996.
- ⁶³ Fuller, 2001.
- ⁶⁴ World Bank, 2001a: 7.
- ⁶⁵ Barrett et al., 2000: 2.
- ⁶⁶ World Bank, 2001a: 154.
- ⁶⁷ See WRI, 2003: 2.
- ⁶⁸ UNDP, 2003: 127.
- ⁶⁹ World Bank, 2002.
- ⁷⁰ NEPAD, 2002.
- ⁷¹ See UNCDF, 2003.
- ⁷² Ribot, 2003: 54.
- ⁷³ Institute for Global Environmental Strategies (IGES), Japan, <http://www.iges.or.jp/>
- ⁷⁴ See: United Nations Environmental Programme, UNEP <http://www.unep.org/IEG/>
- ⁷⁵ 'Multilateralism & Sustainable Development' research carried out by the United Nations University, Institute of Advanced Studies (UN/IAS), see <http://www.ias.unu.edu/research/current.cfm>
- ⁷⁶ See the European Union 'White Paper on European Governance', http://europa.eu.int/comm/environment/governance/index_en.htm
- ⁷⁷ A project supported by the Yale School of Forestry and Environmental Studies (YSFES), see <http://www.yale.edu/gegdialogue>
- ⁷⁸ The Nairobi-based 'African Centre for Technology Studies' (ACTS), see <http://www.acts.or.ke/>
- ⁷⁹ IRG, 2002: 25.
- ⁸⁰ IRG, 2002: 25.
- ⁸¹ McKean, 2000.
- ⁸² Orstom, quoted in Barrett et al., 2000:

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- 25.
- ⁸³ Fuller, 2001.
- ⁸⁴ Salomao, 2002:17.
- ⁸⁵ Shrestha, 1998; Adhikari, 2001.
- ⁸⁶ Rajaonera, 2000: 29.
- ⁸⁷ Marcus R. R. & Kull C., 2003.
- ⁸⁸ Whiteside & Carr, 1997: 33.
- ⁸⁹ World Bank, 2002: 39.
- ⁹⁰ For all this paragraph, see Bazaara, 2003.
- ⁹¹ Havnevik et al., 2000: 15.
- ⁹² Juul, in Benjaminsen & Lund, 2001.
- ⁹³ See Hilhorst & Coulibaly, 1998: 5.
- ⁹⁴ Reardon & Shaikh, 1998: 328.
- ⁹⁵ Bruce & Mearns, 2002: 4.
- ⁹⁶ This is the main argument put forward by Woodhouse et al., 2000.
- ⁹⁷ DFID, 2002b: 10.
- ⁹⁸ Nhantumbo et al., 2003.
- ⁹⁹ See Bruce et al., 1995; and Lund, 1997.
- ¹⁰⁰ DFID, 2002a: 22.
- ¹⁰¹ See <http://www.undp.org/trustfunds/Environment-English-Final.pdf>
- ¹⁰² Salomao, 2002.
- ¹⁰³ Maveneke, 1998.
- ¹⁰⁴ Conyers, 2003: 118.
- ¹⁰⁵ Marcus, R.R. & Kull, C., 2003.
- ¹⁰⁶ For all this paragraph see Bazaara, 2003.
- ¹⁰⁷ See GTZ, 1998; BRUCE et al., 1995, Conclusions; Tembo, E. et al., 2001.
- ¹⁰⁸ Mniwasa & Shauri, 2001.
- ¹⁰⁹ Rugemeleza, 2000.
- ¹¹⁰ Mniwasa & Shauri, 2001.
- ¹¹¹ Whiteside & Carr, 1997: 34.
- ¹¹² Larson, quoted in WRI, 2003: 100.
- ¹¹³ Gibson, quoted in Salomao, 2002.
- ¹¹⁴ Conyers, 2003: 118.
- ¹¹⁵ Adhikari, 2001.
- ¹¹⁶ Lindsay, FAO nd.
- ¹¹⁷ See UNCDF, 2003:71.
- ¹¹⁸ World Bank, 2001b:1.
- ¹¹⁹ See: <http://www.undp.org/trustfunds/Environment-English-Final.pdf>
- ¹²⁰ World Resources, 2003.
- ¹²¹ See also Hilhorst & Coulibaly, 1998.
- ¹²² WRI, 2003.
- ¹²³ Viet et al., 1998: 235.
- ¹²⁴ Raynaut, ed., 1999: 261.
- ¹²⁵ This is the central argument put forward by Berry, 1993.
- ¹²⁶ World Bank, 2003: 2.
- ¹²⁷ Rasmussen & Meinzen-Dick, 1994.
- ¹²⁸ Pokharel, 2001.
- ¹²⁹ Knox & Meinzen-Dick, 1999.
- ¹³⁰ Platteau, 2000: 31.
- ¹³¹ Ribot, 2003: 7.
- ¹³² Platteau, 2000: 31.
- ¹³³ See, for instance, Salomao, 2002, in the context of Mozambique.
- ¹³⁴ See ICLEI, 1998.
- ¹³⁵ See ICLEI, 1998.

- ¹³⁶ Bruce et al., 1998: 15.
- ¹³⁷ Olowu in UNCDF, 2001: 41. See also UNCDF, 2003: 20.
- ¹³⁸ Woodhouse, 1997.
- ¹³⁹ See also Balland & Platteau, 1996.
- ¹⁴⁰ IRG, 2002: 28.
- ¹⁴¹ Lutz & Esmail, 1998: 77.
- ¹⁴² See research jointly conducted by the Groupe de recherche et échanges technologiques, GRET (France) and the International Institute for Environment and Development, IIED (UK) (<http://www.iied.org>; www.gret.org).
- ¹⁴³ World Bank, 2002: 6.
- ¹⁴⁴ Cleaver & Schreiber, 1994: 2.
- ¹⁴⁵ See ARD/RAISE, 2001: 1.
- ¹⁴⁶ UNDP, 2003: 126.
- ¹⁴⁷ NOPA, 1992: 49.
- ¹⁴⁸ NOPA, 1992: 48. In this regard, the new World Bank livestock strategy reflects the opinion that production- or output-orientated objectives are not the only motivation behind pastoral development, which is equally determined by social and environmental objectives (see de Haan, quoted in Bruce & Mearns, 2002: 18).
- ¹⁴⁹ Bruce & Mearns, 2002: 1.
- ¹⁵⁰ Bruce, quoted in Maxwell & Wiebe, 1998: 26.
- ¹⁵¹ Pinstrup-Anderson, quoted in Maxwell & Wiebe, 1998: 27.
- ¹⁵² Maxwell & Wiebe, 1998:10 and 1998: 27 (quoting Watts & Bohle and Patnail).
- ¹⁵³ World Bank, 2003.
- ¹⁵⁴ Agenda 21, Chapter 10.1.
- ¹⁵⁵ UNDP, 2003: 126.
- ¹⁵⁶ Dorm- Adzobu, 1998: 29.
- ¹⁵⁷ See Cleaver & Schreiber, 1994: 180. Some UNCDF projects were initially designed along these lines, such as the Sustainable Development project in Adi Arkay, Ethiopia.
- ¹⁵⁸ Turnham, 1992: 7.
- ¹⁵⁹ World Bank, 2001a: 42-43.
- ¹⁶⁰ See UN University at <http://www.unu.edu/env/land/>
- ¹⁶¹ ARD/RAISE, 2001: ii.
- ¹⁶² Farrington & Boyd, 1997: 382.
- ¹⁶³ World Bank, 2001a.
- ¹⁶⁴ Bruce & Mearns, 2002: 20.
- ¹⁶⁵ <http://www.unccd.int/actionprogrammes/>
- ¹⁶⁶ Cleaver & Schreiber, 1994: 195.
- ¹⁶⁷ See Mniwasa & Shauri, 2001.
- ¹⁶⁸ Øygard, 1999: 21.
- ¹⁶⁹ Speirs & Marcussen, 1998: 17.
- ¹⁷⁰ World Bank, 2001a: 26.
- ¹⁷¹ According to a report by the World Bank Operation Evaluation Department, quoted in World Bank, 2001a.
- ¹⁷² Nhantumbo et al., 2003.
- ¹⁷³ See also *Reaching the poor*, World Bank. 2002: 77.
- ¹⁷⁴ NOPA, 1992: 50.

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- ¹⁷⁵ Lutz & Esmail, p.78. In Uganda, for instance, the guidelines for environmental management set out in the National Environment Action Plan call for a radical departure from centrally formulated plans, but leave the central government with a role in policy formulation and technical supervision.
- ¹⁷⁶ Viet et al., 1998: 227.
- ¹⁷⁷ Deininger, 2003.
- ¹⁷⁸ The Brudtland Commission, 1987.
- ¹⁷⁹ World Bank, 2001a: 3.
- ¹⁸⁰ Barrett et al., 2000.
- ¹⁸¹ Kirkby & Moyo, 2001: 155.
- ¹⁸² IFAD, 2001.
- ¹⁸³ Soil fertility refers to the soil's ability to supply nutrients that enhance crop growth; soil productivity refers to the soil's ability to produce a crop.
- ¹⁸⁴ See World Bank, 2002: 76, and Reardon & Shaikh, 1998: 326.
- ¹⁸⁵ IRG, 2002: 6.
- ¹⁸⁶ Reaching the Poor, 2002: 44.
- ¹⁸⁷ Reardon & Shaikh, 1998: 324.
- ¹⁸⁸ Lutz & Esmail, 77.
- ¹⁸⁹ Reardon & Shaikh, 1998: 324.
- ¹⁹⁰ World Bank, 2002.
- ¹⁹¹ Cleaver & Schreiber, 1994: 14.
- ¹⁹² Text collected by Evans and quoted in Upton, 1987: 61.
- ¹⁹³ Deininger, 2003.
- ¹⁹⁴ Quan, 2000.
- ¹⁹⁵ World Bank, 2003: 35.
- ¹⁹⁶ World Resource Institute report, 2003: 89.
- ¹⁹⁷ UNDP, 2003: 127.
- ¹⁹⁸ A.E Traoré, quoted in ICHRP, 2002: 13.
- ¹⁹⁹ See DFID, 2002b: 14.
- ²⁰⁰ DFID, 2002a: 22.
- ²⁰¹ Lutz & Esmail, 1998: 81.
- ²⁰² Deininger, 2003: xx
- ²⁰³ See Ribot, 2003: 55.
- ²⁰⁴ McKean, 2000.
- ²⁰⁵ See UNCDF, 2003: 95.
- ²⁰⁶ Forsyth & Leach, 1998.
- ²⁰⁷ Ostrom, 1999.
- ²⁰⁸ Ostrom in Øygard et al., 1999: 39.
- ²⁰⁹ Lynch, 1998, quoted in Lyndsay, 1998.
- ²¹⁰ Raynaut ed., 1997: 262.
- ²¹¹ Berry, 1989: 42.
- ²¹² Platteau (1996: 76) argues that formal procedures such as land titling are costly and impose definitive land rights, while informal, village-level practices are cheap and flexible.
- ²¹³ Øygard et al., 1999: 20.
- ²¹⁴ Platteau, 1996: 76.
- ²¹⁵ See also Farrington & Boyd, 1997: 389.
- ²¹⁶ Lutz and Esmail, 1998: 81.
- ²¹⁷ See Bruce & Mearns, 2002: 24.
- ²¹⁸ Raynaut, ed., 1999: 80.
- ²¹⁹ Ribot, 2002: 5.
- ²²⁰ World Bank, 2002: 39.

- ²²¹ World Bank, 2002: 7.
- ²²² Ribot, 2002: 13.
- ²²³ See also Quan J., 2000.
- ²²⁴ Conyers, quoted in Ribot, 2002: 23.
- ²²⁵ Lutz & Esmail, 1998: 77.
- ²²⁶ Ribot, 2002: 17.
- ²²⁷ Lutz & Esmail, 1998: 77.
- ²²⁸ World Bank, 2001a: 17.
- ²²⁹ World Bank, 2000: 111.
- ²³⁰ For the following elements, see World Bank, 2001a: 9, 10 and 11.
- ²³¹ Ribot, 2002b: 28.
- ²³² Platteau (2000: 32) reports that there is evidence that when responsibility for allocating resources is delegated to local organizations (such as panvhayaths in Bangladesh), local elites tend to appropriate a portion of resources for their own needs.
- ²³³ Lutz & Esmail, 1998: 80.
- ²³⁴ Hurni & Ludi, 2000.
- ²³⁵ Nuri & Associates, 2002.
- ²³⁶ Maïga A.M., et al., 2002.
- ²³⁷ See, for instance, the proceedings of a seminar in Washington, 'Integrating Rural Development and Small Urban Centers: A Framework for Effective Regional and Local Economic Development', organized by the World Bank in 2003 (<http://www.worldbank.org/urban/urbanruralseminar/>).
- ²³⁸ Roe, 2004: 58.
- ²³⁹ Satterthwaite, 2004: 9.
- ²⁴⁰ McShane, quoted by Roe, 2004: 61.
- ²⁴¹ See Roe, 2004: 60.
- ²⁴² Brown, 2003.
- ²⁴³ Satterthwaite, 2004.
- ²⁴⁴ IFAD, 2001 :127
- ²⁴⁵ Barrett et al 2000
- ²⁴⁶ Watersheds are systems which supply and distribute a limited water resource to a range of users (e.g., for primary production, domestic consumption, livestock, transportation, etc.).
- ²⁴⁷ The notion of 'fertility' means the capacity of a soil to supply the nutritive elements necessary for growing a crop.
- ²⁴⁸ See also Annexes 1 and 2
- ²⁴⁹ The concept of land husbandry designates a production-oriented approach in soil conservation: the improvement of land resources is the primary objective, while control of soil erosion follows as a result on good land husbandry (the approach emphasizes the importance of immediate returns on investment (Øygard, et al 1999: 51).
- ²⁵⁰ See Barrett, et al 2000 :3
- ²⁵¹ See IFAD, 2001 :145
- ²⁵² Øygard et al 1999 :19
- ²⁵³ That is, all techniques aimed at planning and managing the use of grazing lands to obtain sustainable stock production.
- ²⁵⁴ Øygard et al 1999 :12
- ²⁵⁵ The main technical measures are the following: improved use of agricultural by-products; adoption of composting tech-

niques; fodder production; treatment of crop residues with urea in order to increase digestibility, and raise the nitrogen content fodder production; fertilizing contracts between herders and farmers; use of controlled bushfires (for the regeneration of grasslands); diversification of stockbreeding; integrated development (agro-sylvopastoralism), capable of incorporating the agricultural, pastoral, animal, plant, and water dynamics.

²⁵⁶ The main measures that will have to be advocated at the level of groups or associations of herders will be the following: increase in livestock productivity by improving all production parameters; reduction in the incidence of and the effects of animal diseases; training and monitoring of para-veterinarians from the local communities; increase in fodder resources to enable selected categories of animals (pregnant females and lactating females, weaned calves, animals used in agricultural labor) to cope with annual 'hunger periods'; production and dissemination of complementary foodstuffs (peanut meal, cotton seeds, etc.) and minerals (salt blocks); conception and management of rapid animal destocking systems, especially following periods of drought; prevention and management of conflicts over access to natural resources and their use and setting up of formal committees with the representatives of herders' and farmers' associations

²⁵⁷ Sandford, 1983 :88

²⁵⁸ Reardon 1997

²⁵⁹ Ronnennberg Moller, 1998 and Tiffen

et al 1994

²⁶⁰ World Bank 2001a :158

²⁶¹ See UNEP 2003.

²⁶² World Bank 2001a :161

²⁶³ Veit et al 1998:227

²⁶⁴ Barrett et al 2000 :21

²⁶⁵ IFAD, 2001 :128

²⁶⁶ Above all, in the context of grazing lands (fire helps to destroy harmful species and to help the young shoots of valued species grow). On the other hand, in other contexts, if the fire is not properly controlled, it can destroy the micro-flora and produce sudden mineralization of the organic matter.

Bibliographic references

- Adhikari J. R. 2001. "Community Based Natural Resource Management in Nepal with Reference to Community Forestry: A Gender Perspective" in *A Journal of the Environment*, Vol. 6, No. 7, 2001, Katmandu: Ministry of Population And Environment.
- ARD/RAISE, 2001. *Community-Based Natural Resource Management (CBNRM) in Africa –A Review*. Associates for International Resources and Development (ARD) & Rural and Agricultural Incomes with a Sustainable Environment (RAISE).
- Balland J.M & Platteau, J.P. 1996. *Halting Degradation of Natural Resources. Is there a Role for Rural Communities ?* Rome: FAO.
- Barrett V. Place F. & Aboud A. & Brown D. 2000. "The challenge of improved natural resource management practices adoption in African agriculture: A social science perspective" paper prepared for the workshop on 'Understanding Adoption Processes for natural resource management practices for Sustainable Agricultural Production in Sub-Saharan Africa' Nairobi, Kenya, July 3-5 2000.
- Barriere O.. 1998. "Du foncier à l'environnement: le foncier-environnement" in PADLOS (1998) *Promouvoir la recherche et la formation sur le foncier pour le développement au Sahel*. Actes du Colloque International sur le Foncier au Sahel Ougadougou: CILSS.
- Beinart W., 1996. "Soil erosion, animals & pasture over the long term. Environmental destruction in Southern Africa" in Leach M. & Mearns R. ed. 1996. *The Lie of the land. Challenging Received wisdom on the African Environment*. London:IAI
- Behnke R., & Scoones I., & Kerven C., eds. 1993. *Range ecology at Disequilibrium: New Models of Natural Variability and Pastoral Adaptation in Africa Savannas*. London: Overseas Development Institute
- Benjaminsen T & Lund C. eds. 2001. *Politics, Property and Production in West African Sahel. Understanding natural resource management*. Uppsala: Nordiska Afrikainstitutet
- Berry S., 1989. "Social institutions and access to resources in African agriculture" in *Africa* n.59 41-55.
- Berry S., 1993. *No Condition is Permanent. The Social Dynamics of Agrarian Change in Sub-Saharan Africa*. Madison : The University of Wisconsin Press
- Bromley D. & Cernea M. 1989. *The Management of Common Property Natural resources. Some conceptual and Operational Fallacies*. Washington : The World Bank
- Bruce J., 1998. *Country Profiles of Land Tenure: Africa*. Research Paper n. 130 Winsconsin :Land Tenure Center, Wisconsin
- Bruce J., & Mearns R., 2002. *Natural resource management and land policy in developing countries :Lessons learned and new challenges for the World Bank*. Issue paper n. 115 London : IIED

- Bruce, John W., Freudenberger, M.S. & Ngaido, T. *Old wine in new bottles: creating new institutions for local land management*. Eschborn: GTZ, Deutsche Gesellschaft für Technische Zusammenarbeit, 1995. 211 p.
- Burtland Commission, 1987. *Our Common Future*. Oxford: Oxford University Press.
- Cleaver K. & Schreiber G., 1994. *Reversing the Spiral. The Population, Agriculture and environment Nexus in Sub-Saharan Africa*. Washington : The World Bank.
- Cliffe L. & Lawrence P. 1989. *The dynamics of land tenure and agrarian systems in Africa*. Rome: FAO.
- Conyers D., 2003. "Decentralisation in Zimbabwe: a local perspective" in *Public Administration and Development*, vol. 23, issue n.1 pp. 115-124.
- Cousins B., 1996. "Conflict Management for Multiple resource users in Pastoralist and Agro-Pastoralists contexts" in *IDS Bulletin* vol. 27 n. 3 p. 41-55.
- Deininger, K., 2003. *Land Policies For Growth and Poverty Reduction*. World Bank policy research report, Washington / Oxford: The World Bank & Oxford University Press.
- Department for International Development (DFID), 2002a. *Linking Poverty Reduction and environmental Management: Policy Challenges and Opportunities*. Washington: World Bank.
- Department for International Development (DFID) 2002b. *Better Livelihoods for poor people: The role of Land policy*. Consultation document London: DFID.
- Dorm- Adzobu, C. 1998. "Institutionalizing Environmental Management in Africa" in Veit P. ed. *Africa's Valuable Assets. A Reader in Natural Resource Management*. Washington: World Resources Institute.
- English J., & Tiffen M. & Mortimore M., 1994. *Land Resource Management in Machakos District, Kenya, 1930-1900*. Report N. 5 Washington : The World Bank.
- Farrington J. & Boyd C. 1997 "Scaling up the participatory management of Common Pool resources" in *Development Policy Review*, vol. 15, 371-391.
- Forsyth T., & Leach M., 1998. *Poverty and Environment : Priorities for research and policies*. Brighton :IDS.
- Grosjean, R. & Dubois, O.& Diakité, 1998 *Internal evaluation of the UNCDF Participatory Eco-development Programme*. New York: UNCDF.
- GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit) 1998. *Guiding principles: Land Tenure in Development Cooperation*. AS:GTZ (see http://www.gtz.de/orboden/tenure/te_frm.htm)
- Havnevik, K. & Rwengangira, M. & Tivell A., 2000. *Land management programme in Tanzania* Sida/ASDI.
- Hilhorst T. & Coulibaly A., 1998. *Elaborating a local convention for managing village woodland in southern Mali*. IIED issue paper n.78 London: IIED.
- Hobben A., & Peters P., & Rocheleau D. 1998 "Participation, Civil society, and foreign assistance to Africa" in Veit P. 1998. *Africa's Valuable Assets. A Reader in Natural Resource Management*. Washington: World Resources Institute pp.109-154.
- Hurni H. & Ludi E. 2000. *Reconciling Conservation with Sustainable Development*. University of Berne, Switzerland : Centre for Development and environment (CDE).
- International Council in Human Rights Policy (ICHRP) 2002. *Local Rule: Decentralization and Human Rights*. Versoix, Switzerland: ICHRP.

- ICLEI (International Council for Local Environmental Initiatives, 1998. *Study on national obstacles to local Agenda 21*. Background Paper No. 31 (ICLEI), and CAG Consultants in collaboration with the UNDESA Division for Sustainable Development DESA/DSD/1998/31.
- IFAD (International Fund for Agricultural Development) 1992. *Common Property Resources and the Rural Poor in sub-Saharan Africa*. Rome :IFAD.
- IFAD (International Fund for Agricultural Development) 2001. *Rural Poverty Report 2001*. Rome: IFAD.
- IRG (International Research Group) 2002. *Nature, Wealth, and Power. Emerging best practice for revitalizing rural Africa*. Washington :USAID.
- Kedir N. & Associates, 2002. *Comprehensive socio-economic study in Adi Arka Woreda*. SDP, Addis Abeba.
- Kirkby J., & Moyo S., 2001. "Environmental Security, Livelihoods and Entitlements" in Middleton N. & O'Keefe P. & Visser R. *Negotiating poverty. New directions, renewed debate*. London: Pluto Press. pp.148-161.
- Knox A. & Meinzen-Dick R., 1999. "Collective Action, Property Rights, and Devolution of Natural Resource Management: Exchange of Knowledge and Implications for Policy: A Workshop Summary". Paper. Paper presented at the *Workshop on Collective Action, Property Rights, and Devolution of Natural Resource Management*. June 21-25, 1999 in Puerto Azul, The Philippines. Collective Action and Property Rights (CAPRI) and the German Foundation for International Development (DSE).
- Leach M., 1998. "Development approach : A desk review" in Grosjean, R. & Dubois, O. & Diakité, 1998. *Internal evaluation of the UNCDF Participatory Eco-development Programme* New York: UNCDF.
- Leach M. & Mearns R. eds. 1996. *The Lie of the land. Challenging Received wisdom on the African Environment*. London : IAI.
- Lindsay J., 1998. *Designing legal space: Law as an enabling tool in community-based management*. Community-based Natural Resource Workshop, Washington D.C. May 1998.
- Lund C., 1997. "Legitimacy, Land and Democracy in Niger" in *Review of African Political Economy* - Vol. 24 No. 71 (March 1997), pp. 99-112.
- Lutz E. & Esmail T., 1998. "Natural Resources Management and decentralization" in Litvack J., & Seddon J., *Decentralization. Briefing notes*. Washington: World Bank Institute Working papers.
- Maïga A.M et al., 2002. *Etude sur les initiatives inter-communautaires de gestion des ressources naturelles*. Tombouctou: PACRT/UNCDF.
- Marcus R.R. & Kull C., 2003. "Setting the Stage: The Politics of Madagascar's Environmental Efforts" in *African Studies Quarterly, The Online Journal for African Studies* African Studies Quarterly Volume 7, Issue 1 <http://web.africa.ufl.edu/asq/v3/v3i2a1.htm>
- Maveneke T., 1998. "Local participation as an instrument for natural resources management under the communal areas management programme for indigenous resources (CAMPFIRE) in Zimbabwe" Paper presented to the International Workshop on *Community-Based Natural Resource Management* held in Washington (World Bank) in May 1998.

- Maxwell D. & Wiebe K., 1998 *Land Tenure and Food Security. A Review of Concepts, evidence and Methods*, Land Tenure Center, Research Paper n. 129
- McKean M., 2000. "Community Governance of Common Property Resources" Paper presented at the panel on *Governance and Civil Society' at the Fifth Annual Colloquium on Environmental Law and Institutions 'Sustainable Governance*. 27-28 April 2000, Regal University Inn, Durham, North Carolina
- Middleton, N. & O'Keefe, P. & Visser, R. (eds.), 2001. *Negotiating Poverty. New directions, renewed debate*. London: Pluto Press.
- Mniwasa E., & Shauri V., 2001. *Review of the Decentralization Process and its Impact on Environmental and Natural Resources Management in Tanzania*. Dar-es-Salaam: Lawyers Environmental Action Team (LEAT) (See <http://www.leat.or.tz>).
- Mortimore M., 1989. *Adapting to drought: Farmers, famines and desertification in West Africa* Cambridge:Cambridge University Press.
- NEPAD, 2002. *Comprehensive Africa Agriculture Development Programme*. (see: www.nepad.org).
- Nhantumbo I. & Norsolk S. & Pereira J., 2003. *Community Based Natural Resources Management in Mozambique: A Theoretical or Practical Strategy for Local Sustainable Development? The Case Study of Derre Forest Reserve*. London: IDS, ODI Research paper n. 10 (Sustainable Livelihoods in Southern Africa: Institutions, Governance and Policy Processes <http://www.ids.ac.uk/slsa>).
- Niamir-Fuller, M. ed., 1999. *Managing mobility in African rangelands. The legitimization of transhumance*. London: Intermediate Technology.
- NOPA (Nomadic Pastoralists Project), 1992. *Pastoralists at a crossroads. Survival and Development issues in African Pastoralism*. Nairobi : UNICEF & UNSO.
- Ostrom E., 1999. "Self-governance and forest resources" Paper presented at the Workshop in *Political Theory and Policy Analysis*. Indiana University, USA.
- Øygard R, & Vedeld T. & Aune J., 1999. *Good Practices in Drylands Management*. Ås: Noragric Agricultural University of Norway.
- Platteau J.P., 2000. *Community Imperfection*. Paper presented at the Annual Bank Conference on development Economics, Paris.
- Pokharel, B. , 2001. *Community Forestry and Livelihoods in Nepal*. (www.livelihoods.org).
- Quan J., 2000. *Land Policy and Administration: Lessons learnt and new challenges for the World Bank's development agenda*. Report of a Donor Consultative Meeting on Land Policy Issues World Bank Washington DC 24-27 April 2000 London: DFID.
- Rajaonera L. & Khouidi M., 2000. *Madagascar. Faritany de Fianarantsoa. Programme d'Appui aux Communes rurales. Rapport d'orientation stratégique de programme*. New York: UNCDF.
- Rasmussen L.N. & Meinzen-Dick R., 1994. *Local organizations for natural resource management: lessons from theoretical and empirical literature*. Washington: International Food Policy Research Institute.
- Raynaut C. éd., 1997. *Sahels. Diversité et dynamiques des relations sociétés-nature*. Paris: Karthala.
- Reardon T., 1997. 'Using evidence of household income diversification to inform study of the rural nonfarm labor market in Africa' in *World Development* vol. 25, n.5 735-747.

- Reardon T. & Shaikh A., 1998. "Links between Environment and Agriculture in Africa" in Veit P. ed. 1998. *Africa's Valuable Assets. A Reader in Natural Resource Management*. Washington: World Resources Institute.
- Ribot J., 2003. "Democratic decentralization of natural resources: institutional choices and discretionary power transfers in sub-Saharan Africa" in *Public Administration and Development* vol. 23, issue n.1 pp. 53-66.
- Ribot, J., 2002a. *Democratic Decentralization of Natural Resources. Institutionalizing Popular Participation*. Washington: World Resources Institute.
- Ribot J., 2002b. *African Decentralization. Local Actors, Powers and Accountability* Geneva:UNRISD.
- Ronnenberg Moller M., 1998. *The Changing Roles of rural Non-Agricultural Activities in the Livelihoods of Nigerien peasants*. Copenhagen: Centre for Development Research.
- Rugemeleza N., 2000. "Management of Natural Resources in Tanzania: Is the Public Trust Doctrine of Any Relevance?" Paper presented at the Eighth Conference of the International Association for the Study of Common Property *Constituting the Commons: Crafting Sustainable Commons in the New Millennium*. Bloomington, Indiana, USA, May 31-June 4.
- Salomao A., 2002. *Environmental decentralization participatory natural resources management in Mozambique an assessment of legal and institutional arrangements for community-based natural resources management*. Washington, World Resources Institute.
- Sandford, S., 1983. *Management of pastoral development in the Third World* London: ODI.
- Satterthwaite D. (ed.), 2003. *The Millennium Development Goals and Local Processes. Hitting the target or missing the point* London: IIED.
- Shrestha B., 1998. "Changing forest policies and institutional innovations: user group approaching community forestry of Nepal". Paper presented at the *Community-based natural resource management Workshop*. Washington, The World Bank, May 1998 (See <http://www.worldbank.org/wbi/sdruralpoverty/conatrem/html/Nepal-Paper.htm>).
- Speirs M. & Olsen O., 1992. *Indigenous Integrated farming Systems in the Sahel* Technical Paper n. 179. Washington, The World Bank.
- Speirs M. & Marcussen H.S., 1998. *Limits to environmental planning in a world of structural adjustment: The case of Burkina Faso*. London: ODI.
- Tembo E. & Manisa M. & Maphale L., 2001. *Land information management in customary land in Botswana*. Ministry of Lands, Housing and Environment Department of Lands, Botswana national land policy.
- Tiffen M. & Mortimore M. & Gichuki F., 1994. *More people, less erosion. environmental recovery in Kenya*. Londres : ODI/Wiley.
- Turnham D., 1992. *Towards sustainable development in rural Africa*. OECD, Development Centre, Policy Brief 6.
- UNCDF, 1997. *Eco-development, People, Power and the Environment*. New York: UNCDF.
- UNCDF, 1998. *Taking Risks*. New York: United Nations Capital Development Fund.
- UNCDF, 2002. *Decentralization and Local Governance in Africa. Proceedings*. New York: United Nations Capital Development Fund.

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- UNCDF, 2003. *Empowering the Poor. Local governance for poverty reduction*. New York: UNCDF
- UNDP, 2002. *Human Development Report 2002. Deepening Democracy in a fragmented world*. New York: United Nations Development Programme.
- UNDP, 2003. *Human Development Report 2003. Millennium Development Goal: A compact among nations to end human poverty*. New York: United Nations Development Programme.
- UNEP, 2003. *Tourism and Local Agenda 21. The Role of Local Authorities in Sustainable Tourism. Case studies and first lessons*. Nairobi: UNEP (with the International Council for Local Environmental Initiatives (ICLEI).
- Upton M., 1987. *African farm management*. Cambridge: Cambridge University Press.
- Veit P. ed., 1998. *Africa's Valuable Assets. A Reader in Natural Resource Management*. Washington: World Resources Institute.
- Veit P. & Nagpal T. & Fox T., 1998 "Africa's Wealth, Woes, Worth" in Veit P. ed., 1998. *Africa's Valuable Assets. A Reader in Natural Resource Management*. Washington: World Resources Institute.
- Veit P. & Mascarenhas A. & Ampadu-Agyei, 1998. "African Development that Works" in Veit P. ed., 1998. *Africa's Valuable Assets. A Reader in Natural Resource Management*. Washington: World Resources Institute.
- Whiteside M. & Carr S., 1997. *Services and policies needed to support sustainable smallholder agriculture in Malawi*. Agricultural Services reform in Southern Africa, Environment and Development Consultancy Ltd.
- Woodhouse P., 1997. "Governance and Local Environmental Management" in *Africa* Vol 24, n.74 (December 1997), pp. 537-547.
- Woodhouse P. & Berstein H. & Hulme D., 2000. *African enclosures? The Social Dynamics of Wetlands in Drylands*. Oxford: Lames Currey.
- World Bank, 2000. *Entering the 21 Century. World development report 1999/2000*. Washington: The World Bank.
- World Bank, 2001a. *Making sustainable commitments. An environment strategy for the World Bank*. Washington: The World Bank.
- World Bank, 2001b. *Decentralization and governance: does decentralization improve public service delivery?* Prem Notes n.55.
- World Bank, 2002. *Reaching the Rural Poor*. Washington : The World Bank.
- World Bank, 2003. *World Development Report 2003 : Sustainable Development in a Dynamic World. Transforming Institutions, Growth and Quality of Life*. Washington : The World Bank.
- World Resources Institute, 2002. *2002-2004: Decisions for the Earth: Balance, voice, and power*. Washington: WRI.