The Governance of Nature and the Nature of Governance:

Policy that works for biodiversity and livelihoods

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Acronyms and abbreviations

ABS	Access and benefit sharing
BMC	Biodiversity Management Committees (India)
CBD	Convention on Biological Diversity
CBNRM	Community-based natural resource management
CBO	Community-based organisation
CCA	Community conserved areas
CGIAR	Consultative Group on International Agricultural Research
CITES	Convention on International Trade in Endangered Species of Fauna and Flora
CONAM	The National Commission for Environment (Peru)
COP	Conference of Parties (to the CBD)
CTE	World Trade Organisation's Committee on Trade and Environment
CWM	Community wildlife management
DBS	Direct budget support
DDS	Deccan Development Society
DFID	UK Department for International Development
EIA	Environmental impact assessment
FDI	Foreign direct investment
FAO	Food and Agriculture Organisation of the United Nations
FRA	The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (India)
FTA	Free trade agreement
GEF	Global Environment Facility
GMO	Genetically modified organism
HYVs	High yielding varieties
IGC	Inter-Governmental Committee on Genetic Resources, Traditional Knowledge and Folklore
IGO	Inter-governmental organisation
IIFB	International Indigenous Forum on Biodiversity
ILO	International Labour Organisation
IMF	International Monetary Fund
INRENA	The National Institute for Natural Resources (Peru)
IPRs	Intellectual property rights
IUCN	International Union for Conservation of Nature
JFM	Joint forest management
MA	Millennium Ecosystem Assessment
MDG	Millennium Development Goals
MEA	Multilateral environmental agreements
MKUKUTA	National Strategy for Growth and Reduction of Poverty (Tanzania)
NBA	National Biodiversity Authority (India)
NBSAP	National biodiversity strategy and action plan
Norad	Norwegian Agency for Development Cooperation
NR	Natural resources
NTFP	Non-timber forest product
OECD	Organisation for Economic Co-operation and Development
PA	Protected area
PBR	People's biodiversity register
PDS	Public Distribution System (India)
PESA	*Panchayats (Extension to Scheduled Areas) Act, 1996* (India)
PFM	Participatory forest management
PIC	Prior informed consent
PoWPA	Programme of Work on Protected Areas (CBD)
PRSP	Poverty reduction strategy paper
PTPA	US-Peru Trade Promotion Agreement
RH	Resident hunting (Tanzania)
SBB	State Biodiversity Boards (India)
SEZ	Special economic zone (India)
SPS	Sanitary and phytosanitary measures
TANAPA	Tanzania National Parks Authority
TK	Traditional knowledge
TRIPS	Trade-related aspects of intellectual property rights
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	UN Framework Convention on Climate Change
UNPFII	UN Permanent Forum on Indigenous Issues
UPOV	International Union for the Protection of New Varieties of Plants Convention
USD	United States dollars
WIPO	World Intellectual Property Organisation
WLPA	Wildlife Protection Act (India)
WSSD	World Summit on Sustainable Development
WTO	World Trade Organisation

Contents

EXECUTIVE SUMMARY

Biodiversity and ecosystem services are being degraded faster than at any other time in human history. Most of the world's biodiversity is found in Southern countries where people greatly depend on natural resources but suffer from high levels of rural poverty and often weak governance. Weak governance (eg. political marginalisation and corruption) is a key underlying driver of *both* biodiversity loss and poverty. At the same time, the role of biodiversity in the provision of ecosystem services that underpin national economies and rural livelihoods is largely overlooked. As the Millennium Ecosystem Assessment found, reversing ecosystem degradation while meeting the growing demand for ecosystem services will require significant changes in policies, institutions, and practices.

The 190 Parties to the Convention on Biological Diversity (CBD) are committed to achieve, by 2010, a significant reduction in the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth (the 2010 target). This target has also been incorporated into the Millennium Development Goals. Yet in 2005 the Millennium Ecosystem Assessment (MA) found that ecosystem degradation is accelerating, despite the rapid growth in national parks and protected areas worldwide (from under 3 million km^2 in 1970 to over 20 million km^2 in 2004). This suggests that meeting the objectives of the CBD will also require mainstreaming biodiversity in development sectors; enhancing support for conservation/ sustainable use by local communities; and improving the effectiveness of protected areas – all of which imply changes in governance[1].

This report is an output of IIED's collaborative research project "Policy That Works for Biodiversity and Poverty Reduction" and is based on a literature review and three country case studies (see text box). It examines biodiversity governance at local, national and international level – notably: policy and institutional support for community-based conservation; mainstreaming biodiversity in development sectors and biodiversity planning (NBSAPs); and the CBD process. It also reviews existing good governance principles for biodiversity - the CBD's Ecosystem Approach, the Durban principles for protected areas, and lessons from the MA and natural resource management.

Case study summaries

A key part of this research involved country case studies or "situation analyses" on biodiversity governance conducted in India, Tanzania and Peru. All three are mega-diverse countries which also have high levels of rural poverty; and all three ratified the Convention on Biological Diversity (CBD) over a decade ago. The main objectives of the case studies were to review biodiversity governance in each country (mainly at national level): policies, institutions, processes, etc.; and identify key issues and approaches for more in-depth action-research. The studies examined the integration of livelihoods in biodiversity policies; stakeholder participation in policy-making; policy implementation; and sectoral coordination.

The Tanzania study focuses mainly on the implementation of community forest and wildlife management policies, and mainstreaming biodiversity in development policy (the MKUKUTA). The Peru study focuses on mainstreaming biodiversity in development sectors and poverty reduction strategies, and showcases a successful community conservation area, the Andean Potato Park. The India study covers all these issues, and reflects in-depth on the lessons of the process for preparing the National Biodiversity Strategy and Action Plan.

The research process was itself used to promote policy dialogue and collective action on biodiversity governance and livelihood issues in the focal countries, by bringing together different actors—local communities and policymakers, environment and development sectors—to discuss particular concerns.

1 "Governance" includes policies, institutions, processes (of policy-making, implementation, review etc) and power. It is about who decides and how. It is as much about process and politics as it is about the content of policies and laws.

Why is current governance failing biodiversity and livelihoods?

As *most* protected areas have people residing within them or dependent on them for their livelihoods, exclusionary approaches have had profound social costs and a number of protected areas have impoverished the communities living in and around them, including some of the world's poorest and most vulnerable, by denying them access to traditional resources for food gathering, grazing, water, etc. As well as losing their livelihoods, local communities have been disempowered when control of land and resources has been taken over by governments or private corporations. Such disempowerment encourages the abuse of open-access assets. Many policies and policymaking processes are guided by the conventional conservation paradigm, which assumes that local people destroy biodiversity to meet their needs because they are poor. Yet there is evidence to show that poor people in biodiversity rich areas are both able and motivated to conserve biodiversity when they are allowed to play an active role in shaping conservation initiatives and have secure rights to resources. Secure legal rights to benefit from natural resources give communities a key incentive to participate in and sustain NRM.

Over the last two decades, the top-down exclusionary conservation approach has been increasingly questioned on both ethical and practical grounds. People living in and around protected areas are now beginning to be viewed more as an asset for conservation than a threat, with important capacity to draw on, particularly given the often limited state resources for managing protected areas.

At the ***local level***, we have seen the emergence of ***community-based conservation*** approaches which seek to engage local communities in management decisions, devolve rights to resources and allow sustainable use, to varying degrees. Many countries have introduced new policies and laws to support community-based conservation and there have been some successes. However, in most cases, community-led conservation remains small-scale and isolated and is poorly integrated within the formal conservation sector. Many of the barriers to effective community conservation stem from external policies and institutions: limited participation of communities in the development of community conservation policies; insufficient devolution of authority and benefits to communities; and lack of support from other natural resource and economic sectors.

At the ***national level***, biodiversity is continually being degraded by ***mainstream development*** processes outside protected areas (where most biodiversity is located), including agriculture, tourism, extractive industries, and so on. Mainstreaming biodiversity in other economic sectors is critical to tackle these drivers of biodiversity loss and to create more supportive conditions for community-led conservation efforts. However, many problems stem from the fact that biodiversity is economically "invisible": it is effectively "unowned", unpriced and/or unmarketed. Environmental protection is too often perceived as a constraint to development—environmental assets need to be recognised as producers of welfare for the poor and revenue for national economies. This is especially relevant to decision-making on foreign direct investment, which far surpasses development assistance in volume and poses a significant threat to biodiversity.

The ineffectiveness of the ***international*** biodiversity governance framework has been identified as one of the most significant obstacles to achieving the 2010 target. This includes the weak political clout of biodiversity institutions compared to those for trade and development, which are often in conflict with biodiversity goals. There are also significant gaps between CBD policies on paper and their implementation in practice (partly due to the proliferation of decisions, targets etc.); gaps between the power status of Northern and Southern Parties; a relative attention gap on the CBD's *sustainable use* objective, which links conservation and development; and a limited focus on agricultural biodiversity, human rights and community rights to share the benefits from their resources. Furthermore, there are limited opportunities for local biodiversity managers to participate in international policy, while conservation NGOs - and it seems, life science lobbies - are quite influential.

What kind of governance do we need?

Two important frameworks exist for effective and equitable governance of biodiversity, but need to be adopted more systematically:

- The ***CBD's ecosystem approach***: a strategy for the integrated management of land, water and living resources that was adopted in 2000 as "the primary framework for action under the Convention" . It seeks to balance different interests in society: local and global biodiversity values, conservation and development; and emphasises the need for decentralised management.

- A number of ***principles for the management of protected areas,*** adopted at the Durban World Park's Congress in 2003, which emphasise subsidiarity, participation in decision-making, equity and accountability. Many of these principles were subsequently adopted by the CBD Programme of Work on Protected Areas (COP7).

The Millennium Ecosystem Assessment also provides some interesting insights on governance, emphasising, among other things: stakeholder participation in ecosystem and protected area management; support for existing local practices and institutions that work; and the role of local rights and benefit capture in many success stories. Experience with natural resources has similarly shown the need for decentralised and adaptive management given the local variability and unpredictability of natural ecosystems; and for local resource managers to participate in policy making. As the case studies found, broad participation in the development of biodiversity policy (eg. NBSAPs) need not imply higher costs, but often results in better implementation.

Policies for community conservation have been most effective when they build on local experience and 'experiments' that have worked, and provide clear incentives for community involvement (ie. sufficient benefits without undue administrative hurdles). Scaling-up community conservation beyond area-based projects will require institutional change so that 'top-down' external institutions (both government authorities and NGOs) truly devolve or share management with local communities, and start supporting local institutions. But such institutional change is difficult, particularly when vested interests are at stake – hence it requires clear leadership from the top and measures at multiple levels: professional incentives, policy and legal reform, guidance, training and learning-by-doing.

Progress with mainstreaming biodiversity in development policies has been limited – but where progress has been made, it has involved building on various existing processes for integrating environment and development, rather than developing a separate biodiversity 'master-plan'. At local level, livelihoods are naturally cross-sectoral – hence support is required for local institutions that can best mainstream biodiversity locally, and for local resource managers to participate in policy debates.

Recommendations

Based on the global review and the case studies, the report identifies a number of conclusions and recommendations for improving biodiversity governance:

Support action-research processes on governance
As well as conventional projects to protect wildlife or forests, support is needed to address the underlying governance problems that result in the loss of biodiversity and in conservation measures with social costs. Participatory policy research can help to understand and influence current governance regimes, bring together those who control biodiversity policy and marginalised groups, and move policy debates forward.

Improve decision-making processes
- Actively engage indigenous representatives from biodiversity rich areas in CBD decision-making processes, recognising them as *rights*-holders as distinct from *stake*-holders, given their close dependence on, and historical connection with, biodiversity.

- Improve participation in national policy processes, especially by local groups.

- Link global biodiversity decisions with local priorities via multi-stakeholder fora. Major decisions about conservation priorities and financing are taken by intergovernmental organisations such as the CBD and the

GEF, international conservation NGOs and national governments. To date, many biodiversity decisions—notably around protected areas—have excluded local biodiversity managers and conflicted with their needs.

- Feed local knowledge, and science, into decision-making.

Recognise and enforce local rights

- Apply good governance principles to genetic resources. As a minimum, the right of indigenous and local communities to decide over access to genetic resources they customarily use (eg. traditional crop varieties) should be recognised and made subject to their prior informed consent. In addition, communities should be allowed access to *ex situ* genetic resources they have lost, to enable adaptation to climate change.

- Provide clear incentives for community participation in NRM/ community conservation.

- Devolve resource rights and create strong local institutions.

Strengthen governance at the local level

- Balance national control and enforcement with devolved governance. Biodiversity governance regimes need to shift from the current dominant focus on state-run protected areas and legal enforcement to support a greater diversity of governance approaches, such as sustainable use, community conserved areas (CCAs) and co-management, all of which recognise and build on existing governance arrangements at local level.

- Apply good governance principles to protected area management, such as recognising pre-existing customary rights to land and resources; sharing benefits fairly so that poor communities do not bear just the costs of conservation; enabling active community participation in PA management (even if use is not allowed); creating shared or devolved management responsibility; and giving communities compensation equal to the loss of livelihood, income and opportunity where exclusion is the only means of protecting critical biodiversity.

- Enhance support for CCAs and agro-biodiversity.

- Create new institutional incentives to encourage devolution and start building downward accountability. Critical to this will be changing the mind-sets of conservation/NR officials and professionals through training which promotes socially-oriented and cross-sectoral approaches.

Improve policy coherence and mainstreaming of biodiversity across all sectors

- Revise conservation policies to promote coherence with indigenous and human rights frameworks, both nationally and internationally.

- Tackle mainstreaming by building on existing integrating processes rather than through separate master plans.

- Promote mainstreaming via local institutions, but with support from higher-level institutions. More funding is needed to strengthen institutions that can best mainstream biodiversity locally and for sectoral departments to promote more coherent policies.

- Strengthen global and national biodiversity institutions. At international level, biodiversity institutions are marginalised from more powerful economic fora such as the WTO; and are being sidelined in favour of regional and bilateral trade agreements negotiated largely behind closed doors.

- Emphasise the economic benefits of biodiversity conservation and make explicit the links between biodiversity and development objectives.

The next steps

The final part of the report presents some practical approaches and methodologies to improve biodiversity governance, focusing in particular on empowering marginalised communities, and understanding and improving governance regimes from local to national level. Approaches include strengthening local institutions and establishing regional federations; tackling power asymmetries; creating governance learning groups; using deliberative democracy tools such as citizens' juries and scenario workshops; and focusing efforts on promoting policy instruments and laws that improve the process of policymaking and implementation across the board, rather than focusing only on changing the contents of a single policy.

CHAPTER 1. INTRODUCTION

Ecosystem services have been disturbed to such an extent that, unless remedial action is taken urgently, achieving both the UN Convention on Biological Diversity (CBD) target of slowing biodiversity loss by 2010 and the Millennium Development Goals (MDGs) by 2015 could prove impossible (MA, 2005a). This report looks at the reasons behind this crisis, pinpointing governance as the crucial factor to get right.

1.1. Governance, biodiversity and livelihoods

Governance is about who decides and how, and encompasses policies, institutions, processes and power. Decisions are often influenced by powerful actors (financially and politically) while other groups in society have little influence. Experience with natural resource governance shows that decisions will be most effective when they engage a range of stakeholders, including local resource users/managers; use diverse information sources (eg. local as well as expert knowledge); and learn from experience on the ground (see Chapter 3, Part 1).

For the last century or more, biodiversity governance has been largely centralised and top-down, and has focused primarily on global conservation goals, often at the expense of local people's livelihoods. The actual and potential role of communities in conservation has received relatively little support, despite their knowledge, innovations and practices relating to biodiversity (as recognised by CBD Article 8(j)). Exclusion of communities from conservation management and the costs they suffer as a result of restricted access or displacement by externally imposed protected areas – the cornerstone of many conservation strategies – have created conflicts with many conservation authorities. These can threaten the long-term sustainability of conservation efforts.

Experience suggests that more transparent, inclusive and decentralised forms of governance, along with secure property rights for local communities, can improve outcomes for both biodiversity and local livelihoods (MA, 2005b; WRI *et al.,* 2005; Pimbert, 2003a). Community-based conservation is particularly relevant today as the global community strives to meet both the CBD and MDG targets. Such approaches are critical for delivering both conservation and poverty reduction objectives, but require changes in policy and governance to succeed on a wider scale.

Most of the world's biodiversity is found in Southern countries with high levels of rural poverty, high dependence on natural resources and often weak governance (opaque decision-making, corruption, lack of rights etc.). Yet the importance of biodiversity as a resource for economic development and for sustaining the livelihoods of the poor is largely overlooked by development and economic sectors. The role of biodiversity in providing the ecosystem services, security and resilience that underpin economic development is poorly understood and consequently under-valued, despite growing climatic and ecological uncertainty. Reversing ecosystem degradation while meeting the growing demand for ecosystem services requires "significant changes in policies, institutions, and practices that are not currently underway" (MA, 2005a).

1.2. Objectives and focus

This report is an output of IIED's collaborative research project "Policy That Works for Biodiversity and Poverty Reduction" and is based on a literature review and three country case studies that were conducted during the project development phase (2003-2006). The project aims to improve understanding of:

- How external policy, institutional and economic instruments and processes (ie. "governance") affect community-based initiatives for biodiversity and poverty reduction.

- How to better engage with governance in order to scale-up such community initiatives.

The project builds on the approaches and analysis (Box 1) used in two earlier IIED projects: "Policy That Works for Forests and People"[2] and "Policy That Works for Sustainable Agriculture and Rural Regeneration",[3] as well as more recent IIED analyses of natural resource governance. It also aims to contribute to the United Nations Development Programme (UNDP) Equator Initiative's research and learning component on scaling-up community initiatives for biodiversity and poverty reduction through policy impact.[4]

Box 1. Key questions used in the analysis

The analysis of policies, institutions and processes focuses on the following key questions:

1. How are the interests/values of different stakeholders addressed in policy instruments (or contents)?
2. How do different actors participate in and influence policymaking processes? Which groups dominate and which are marginalised?
3. What information is used or not used in policymaking? Why are certain paradigms dominant and why do they persist?
4. How is policy implemented? To what extent is policy institutionalised to enable effective implementation?
5. What are the impacts of policy? How are the impacts of policy evaluated and lessons fed-back to improve policy?
6. How is policy co-ordinated between different sectors and levels?
7. How can institutional co-ordination and mainstreaming be improved?
8. What factors and conditions facilitate policy and institutional change?
9. What practical approaches and tactics can be used to improve biodiversity governance?

By focusing on improving governance, this report seeks to improve outcomes for both biodiversity and rural livelihoods. Weak governance (eg. political marginalisation and lack of rights) is a key underlying driver of both biodiversity loss and poverty, and a constraint to addressing the two issues together. Real progress in environmental management and poverty reduction often involves changes in governance (Macqueen and Mayers, 2006; MA, 2005a; WRI et al., 2005; Bass et al., 2005; DFID, 2002) and tackling political relationships that govern access to resources and equity (Alcorn et al, 2006).

Biodiversity governance is a vast and complex field, not only because governance is complex, but also because biodiversity is such a broad concept, encompassing diversity at genetic, species and ecosystem level, and associated functions or services. This report does not cover all its dimensions in depth, but essentially addresses three broad challenges:

1) *Linking biodiversity and poverty agendas*: There has been a long-running debate on the links between biodiversity conservation and poverty reduction, rooted in an even longer debate on environment-development linkages. There are sometimes conflicts between these two agendas: conservation activities can result in increased poverty (eg. through loss of access to resources) and poverty reduction efforts can undermine biodiversity through over-exploitation of natural resources. At the same time, the two goals can be mutually supportive: many conservation initiatives need to address local livelihoods to succeed in the long term, while poverty can

2 http://www.iied.org/pubs/search.php?s=FPTW
3 http://www.iied.org/pubs/search.php?k=&t=&a=&w=&s=SPTW
4 www.undp.org/equatorinitiative

be reduced through better management and conservation of biodiversity to enhance income, health, food security, etc.

2) *Improving policy and institutional support for community-based conservation:* Since the mid-1980s, community-based conservation approaches have been promoted as a means to improve conservation and reduce poverty, but have been criticised for their apparent failure to deliver tangible successes against either goal. However, much of the problem lies with external governance regimes (policies, institutions and processes) which have not provided effective support for community conservation. For example, conservation organisations (both government and non-government) have often been reluctant to devolve resource management responsibility and rights to communities, build local institutions and institutionalise participatory approaches. Policies and institutions across different natural resource and economic sectors also tend to be unsupportive of community-based conservation.

3) *Mainstreaming biodiversity in development:* In the past, responses to environment and biodiversity problems have largely remained within the environment sector and therefore failed to tackle their underlying causes. Biodiversity is continually being degraded by mainstream development processes such as intensive agriculture, trade, forest asset stripping etc., often encouraged by national growth, macro-economic and fiscal policies. Thus, biodiversity concerns need to be integrated across different sectors in order to slow the rate of biodiversity loss, particularly given that most biodiversity resides outside protected areas. However, such integration is difficult since the value of biodiversity and ecosystem services to society (and hence the cost of their loss) is rarely taken into account in national accounting and economic decision-making.

Part One of this report explores global debates, trends and policy challenges in biodiversity governance and mainstreaming. It is divided into the governance changes needed at local, national and international levels.

Part Two provides case studies—or "situation analyses"—of biodiversity governance in Peru, Tanzania and India. These examine how participation and livelihoods are addressed in policies on biodiversity, protected areas, wildlife and forests;[5] how biodiversity and livelihoods are addressed in agriculture and other economic sectors; and processes of policymaking and implementation. They are based on interviews, workshops and studies involving a range of stakeholders (policymakers, non-government organisations, researchers, community-based organisations, indigenous communities, etc). In both the global and country level analysis, particular attention is paid to the questions in Box 1. These questions essentially reflect the key attributes of effective policy processes, identified through previous policy studies.

Part Three identifies conclusions and key issues to be addressed, and offers some practical ways forward to improve biodiversity governance and empower civil society.

5 **Biodiversity is a relatively new concept, and its conservation and use is largely shaped by policies for protected areas, wildlife, forests and other natural resource sectors.**

PART 1

BIODIVERSITY GOVERNANCE ISSUES: A GLOBAL REVIEW

CHAPTER 2. BIODIVERSITY

2.1. Key terms

According to the widely accepted definition in the Convention on Biological Diversity (CBD), *biodiversity* is the diversity of genes, species and ecosystems, and their *variability*, or ability to change.[6]

This section introduces the key components or levels of biodiversity—genes, species and ecosystems—and the corresponding governance frameworks that relate to them (global, national and local). It is interesting to note that in most cases, the CBD does not set the agenda for biodiversity governance, as other (economic) policies and institutions have far more influence on how biodiversity is governed (with the exception of protected areas).

Genes

Genetic diversity refers to the variety of genes that produce the different characteristics of a living organism—both visible (phenotypes) and non-visible (genotypes). A gene is a set of DNA sequences that provides the information required to produce a protein. Genetic diversity usually refers to the sub-species level, ie. the diversity of varieties or strains of a species and/or of individuals that make up a population. It can also refer to diversity at the sub-gene level (eg. mutations). Genetic diversity is particularly important for crop and livestock breeding in agriculture, eg. for finding genes which grant resistance to drought or disease, both in the formal/commercial sector and small scale/traditional farming systems. It is also used by other industries to find and develop commercial products—bioprospecting—eg. cosmetics, pharmaceuticals, etc. Sometimes it is not the genes *per se*, but the biochemicals they produce that are sought (eg. for medical activity).

Governance

The CBD's third objective (see Chapter 5) on access and benefit-sharing (ABS) aims to facilitate "access to genetic resources" and ensure equitable benefit-sharing between the users (industrialised countries) and providers of genetic resources (biodiversity-rich Southern countries). The Food and Agriculture Organisation of the United Nations (FAO) Treaty on Plant Genetic Resources for Food and Agriculture also provides a similar global system for ABS, which deals with agricultural genetic resources, particularly commercial crops. However, other global governance frameworks which promote free trade and intellectual property rights (eg. World Trade Organization and World Intellectual Property Organization agreements) and their national equivalents have greater influence over genetic resources and do not require ABS. Similarly, global and national policies on agriculture have a significant (but largely negative) influence on genetic diversity. Access to and maintenance of genetic resources are also governed by local or customary institutions, eg. those that regulate use of scarce natural resources or promote seed exchange.

Species

Species are the individuals and varieties that can reproduce together to give fertile offspring. This is the level which provides most of biodiversity's provisioning services, ie. resources of value to individuals (eg. for food, fibre, fuel), as well as to different economic sectors (fisheries, forestry, tourism, etc). It is also the level at which threats to biodiversity are largely assessed (eg. the International Union for Conservation of Nature Red Data Lists) and at which many global conservation efforts are targeted. For example, threatened habitats or ecosystems are targeted to maintain viable populations of species, especially rare, threatened or endemic species (those unique to a specific location).

6 Some commentators make a distinction between agricultural biodiversity or *agro-biodiversity*—domesticated resources including crop varieties, livestock breeds and so on—and "wild" biodiversity (wild fauna and flora). The Food and Agriculture Organisation (FAO), however, links the two, defining agricultural biodiversity as the diversity of genetic resources (domesticated and wild) used directly or indirectly for food and agriculture, including the diversity of agro-ecosystems (FAO, 1998).

Governance
In addition to the CBD, there are a wide range of multilateral environmental agreements (MEAs) that are aimed at species conservation. These range from those that target specific activities—such as the Convention on International Trade in Endangered Species of Fauna and Flora (CITES)—to those that target specific types of species—eg. the Convention on Migratory Species (CMS)—or to those that are focused on particular species or groups, such as the Agreement on the Conservation of Albatrosses and Petrels (ACAP). Use of species is also regulated by informal/customary local institutions that protect sacred species or sites, or ensure their sustainable use.

Ecosystems

The term "ecosystem" is defined by the CBD as a "dynamic complex of plant, animal and micro-organism communities and their nonliving environment interacting as a functional unit". The conceptual framework of the Millennium Ecosystem Assessment (MA), which examined the link between *ecosystem services* and human wellbeing, is that biodiversity underpins a range of ecosystem services on which human wellbeing depends (MA, 2005a). It identifies four types of ecosystem service:

1. *Provisioning*: eg. food, freshwater, wood, fibre, fuel, water.

2. *Regulating*: eg. climate, flood and disease regulation, water purification.

3. *Cultural*: eg. aesthetic, spiritual, educational, recreational.

4. *Supporting* (support all the others): eg. nutrient cycling, soil formation, primary production.

Previously, reference was often made to ecosystem goods and services to distinguish between provisioning services and other ecosystem services and functions. However, the MA uses the term "ecosystem services" to denote both goods and services, and includes both natural and human-modified ecosystems as sources of ecosystem services.

Governance
Ecosystem conservation is governed by a range of institutions from local to national and international levels including:

- Multilateral environmental agreements (MEAs) such as the UN Framework Convention on Climate Change (UNFCCC), CBD, The World Heritage Convention, and the Ramsar Convention on Wetlands.

- Global markets such as carbon markets and the emerging REDD (Reduced Emissions from Deforestation and Degradation) schemes.

- National protected area systems which often protect important services (eg. watersheds, climate stability, aesthetic values), as well as genes and species.

- National/regional water management bodies.

- National schemes for payments for ecosystem services.

- Local institutions for resource management.

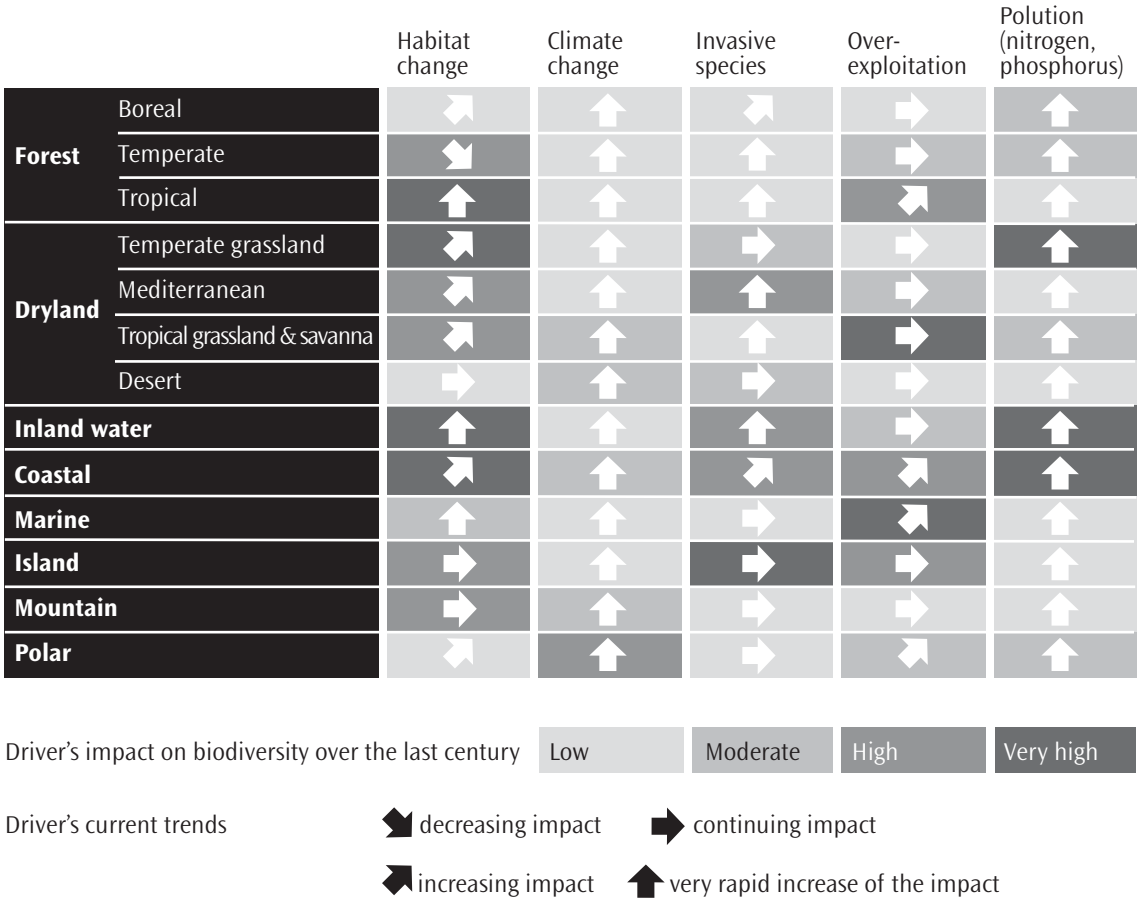
In addition, agreements on indigenous peoples' and human rights also recognise the rights of indigenous and other local people to regulate the use of biodiversity on their territories—including genes, species and ecosystems—given their economic, social and cultural value.

2.2. Biodiversity loss

The MA found that virtually all of the Earth's ecosystems have now been dramatically transformed through human actions (MA, 2005a). Human actions are fundamentally and to a large extent irreversibly changing the diversity of life on Earth. Approximately 60% (15 out of 24) of the ecosystem services examined by the MA were found to be degraded. Changes in biodiversity due to human activities have been more rapid in the past 50 years than ever before, and the most rapid changes in ecosystems are now taking place in developing countries. There have been about 100 recorded extinctions in the last 100 years, and if less well-documented but highly probably extinctions are included, the extinction rate is as much 1,000 times above the background rates in fossil records (MA, 2005b).

The MA estimated that between 10% and 50% of species in well-studied higher taxonomic groups are now threatened with extinction (based on IUCN criteria of threats). It found that genetic diversity has declined globally, particularly among domesticated species. "Since 1960, there has been a fundamental shift in the pattern of intra-species diversity in farmers' fields and farming systems as a result of the 'Green Revolution[7]'" (MA, 2005b).

Figure 1. Significance of direct drivers of biodiversity loss by ecosystem type



Source: MA, 2005b

7 **Intensification of agricultural systems coupled with specialisation by plant breeders.**

Box 2. Climate change and biodiversity loss

Climate change is likely to lead to a sharp increase in species extinction rates as habitats are affected by rainfall and temperature change (Reid and Swiderska, 2008). The MA estimates that climate change will be the main driver of biodiversity loss by the end of this century. A member of the Intergovernmental Panel on Climate Change (IPCC) recently estimated that a quarter to a third of all species will become extinct by the middle of this century because of climate change (Prof. Parry, personal communication, 2008). At the same time, biodiversity loss and ecosystem degradation are expected to result in more severe climate change impacts and weaker capacity for adaptation. Thus, special care is needed to ensure that responses to one problem also bring positive (or neutral) outcomes for the other. Many of the proposals for climate change mitigation to date have paid scant attention to biodiversity conservation or the world's poor, who are particularly vulnerable to both climate change and biodiversity loss. As the Secretary to the CBD noted in the run-up to the Potsdam G8+5 Environment Ministers meeting in March 2007, "climate change and biodiversity loss… are poised to interfere with, and even reverse, progress towards the MDGs"

Environment ministers at the Potsdam meeting agreed that more efforts are needed to coherently address biodiversity and climate change issues together since they are intertwined. Preventing deforestation may be one approach as tropical deforestation is a key driver of biodiversity loss and also contributes to around 18-25% of global CO_2 emissions each year. Tropical forests hold on average 50% more carbon per hectare than forests in temperate and boreal areas and have richer biodiversity than any other terrestrial ecosystem. At the recent Conference of the Parties to the Climate Change Convention in Bali (2007), preventing deforestation finally got onto the official agenda. However, proposals to conserve large areas of forested land to reduce emissions from deforestation rarely provide forest-dependent communities with access to either carbon finance or forest resources (Reid and Swiderska, 2008). The biodiversity, climate change and poverty benefits of small-scale initiatives that build on local knowledge and practices may be many times greater.

The MA identified five direct drivers of biodiversity loss: (Figure 1). The significance of each driver varies across different ecosystems, but overall the main problems are land conversion (for agriculture, infrastructure and urbanisation) for terrestrial systems; over-exploitation (fishing) for marine systems; invasive species on islands; and a mix of physical changes, water extraction, pollution and invasive species for freshwater systems. Climate change is, however, likely to overtake all of these threats as the dominant driver of loss at the end of the century (Box 2).

While biodiversity loss is clearly a consequence of these direct drivers, these are often simply a symptom of wider external pressures including population pressure, macro-economic policy, scientific and technological change and socio-political or cultural factors. Contemporary examples include:

- Consumption and "affluenza": while local people may contribute to exploitation of biodiversity in some cases, consumption demands of richer urban populations are often far more significant drivers of biodiversity loss (Weber, 2006; Swiderska, 2003). For example, in many parts of Southeast Asia the sale of forest assets by governments for conversion to oil palm plantations has become a major driver of deforestation.[8] This in turn is driven by demand for cheap vegetable oil for use in the food, cosmetics and biofuel industries (see below). As a result, indigenous peoples who depend on the forests for subsistence are losing their ancestral land and livelihoods (Tauli-Corpuz and Tamang, 2007). In India, the recent decline in tiger populations is due to continued poaching to serve demand for tiger skins and body parts in China and other parts of East Asia, as well as to habitat loss as a result of large-scale mining and hydropower projects (Buncombe, 2007).

8 **According to Greenpeace, demand for oil palm in Asia by large companies such as Unilever, Nestlé and Procter and Gamble is also one of the principal drivers of climate change** (*The Independent,* **9-11-07**).

- Energy policies: biofuels are set to become an increasingly important driver of deforestation and biodiversity loss in the South, rather than being the green solution that many people believe them to be. The European Union and United States have adopted ambitious targets for the use of biofuels. Large-scale demand for biofuel plantations is likely to accelerate deforestation and displace millions of biodiverse small farmers who will lose their land and livelihoods (as has already happened in Southeast Asia and Colombia, and is increasingly happening in Southern Africa). Furthermore, the habitat that has proven most suitable for oil palm (a biofuel crop) in most areas is biodiversity-rich lowland tropical rainforest (Reid and Simms, 2007). Even if uncultivated "wasteland" is used to produce biofuels, as some are proposing, such common lands are often used for grazing and collecting non-timber forest products (NTFPs) and can be vital for poor and vulnerable groups.

Where does governance fit in?

Poor governance—including weak law enforcement and lack of transparency and accountability of government and private sector institutions—is a key underlying driver of both ecosystem and biodiversity degradation and poverty (DFID, 2002; WRI *et al.,* 2005; Irwin and Ranganathan, 2007). The Intergovernmental Panel on Forests (predecessor to the UN Forum on Forests), for example, identified the failure of governments and other institutions to recognise and respect the rights of indigenous and other forest peoples to their territories, forests and resources, as an underlying cause of deforestation and forest degradation (Intergovernmental Panel on Forests, 1997).

Lack of transparency generally goes hand in hand with corruption and patterns of natural resource use that are both unsustainable and inequitable (Macqueen and Mayers, 2006; WRI *et al.,* 2005). For example, illegal logging and fishing are prime causes of depletion of common pool resources on which poor groups rely (WRI *et al.,* 2005). These problems are often compounded by unclear tenure and use rights for poor groups. New dynamics unleashed by globalisation are bringing ever greater pressure to bear on land and natural resources and increasing the presence of large companies in local level decisions and politics.

2.3. The many values of biodiversity

Decisions about biodiversity management reflect how people value and understand it. The CBD recognises a wide range of biodiversity values: intrinsic, ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic (UN, 1992). The values of biodiversity are often referred to as intrinsic, utilitarian and unexplored future option values (CBD Secretariat, 2005).

A key distinction can be made between anthropocentric values, defined in terms of how human needs and preferences are met, and non-anthropocentric values, which refer to the inherent worth of nature (or biodiversity) independent of the value placed on it by humans. Sometimes this distinction is expressed as instrumental values related to human uses of biodiversity *versus* intrinsic—or non-use—values (Table 1).

The *direct use* values of biodiversity contribute to both local livelihoods and national economies. Rural livelihoods in the South are highly dependent on biodiversity for food, nutrition and health as there are often few alternatives. About 60% of the world's people depend on the informal health sector (WHO, 2003), because of limited access to healthcare or cultural preference. Thus, medicinal plants effectively provide a substantial (but largely unrecognised) subsidy to national healthcare services. Trade in medicinal plants in South Africa has been estimated to be worth US$60 million per year (Mander, 1998). The South African MA estimates that the total value of day-to-day wild resource consumption is around US$800 million (Biggs *et al*., 2004).

Biodiversity also provides a wealth of raw materials for the formal health sector: most of the world's modern drugs are derived from biodiversity (Koziell and McNeill, 2002). Tropical forest plants, for example, have been found to contain medically active compounds with potential for treating HIV/AIDS, cancer and other diseases. Marine organisms have also yielded a variety of drugs, including anti-tumour compounds which are currently undergoing clinical trials (MA, 2005c).

Table 1. Examples of direct use, indirect use and non-use values of biodiversity

Use values			Non-use values
Direct use values	Indirect use values	Option values	
Timber	Carbon storage	Industrial	Landscape
Firewood	Watershed protection	Agricultural	Heritage
Medicine	Human and animal habitat	Pharmaceutical	Cultural
Construction	Erosion control	Recreational	Existence
Wild meat/veg/fruit	Micro-climate regulation		Bequest
Animal fodder	Nutrient cycling		
Recreation			

Source: Adapted from Hansen and Top (2006); IIED (2007); and EEP (2003).

Agricultural biodiversity has direct use value, especially for small farmers and sustainable/organic agriculture; and future option value for both small-scale and commercial farming to enable recovery from crop failure. It provides a range of genetic traits and locally adapted crop varieties from which to source resistance to pests, drought etc. For farmers in marginal/risk-prone environments, biodiversity is important to enhance resilience in production systems. At a wider level it can safeguard against national economic losses.

Traditional farming systems in centres of origin or diversity of food crops—such as the Andes—act as global repositories of genetic resources for food and agriculture. Over hundreds of years, traditional farmers have domesticated and conserved most of the world's food crops and livestock breeds, and they continue to experiment to improve them today, creating further diversity (Swiderska, 2006; Torres, 2005; Argumedo and Pimbert, 2006). Quechua farmers in Peru, for example, manage a large array of plant and animal species in different stages of domestication and have helped to create the rich genetic diversity of the Andes (Argumedo and Pimbert, 2006). While many genetic resources are stored *ex situ* (in seed banks and research centres), only those found *in situ* (in farmers' fields and gardens) are available to be continuously improved and adapted to local conditions by farmers' selection.

The exploration of biodiversity for resources of social and economic value—or bioprospecting—is carried out by a wide range of industries, including pharmaceutical, herbal medicine, seeds, crop protection, cosmetics, horticulture, environmental monitoring, manufacturing and construction. Bioprospecting can provide revenues for conservation, technological capacity for research and development in the South and, in rare instances, large profits for corporations. The value of undiscovered pharmaceuticals from tropical forest plants has been estimated at US$109 billion (Mendelson and Balick, 1997). According to the MA, many bioprospecting activities and revenues are expected to increase over the next decades, including pharmaceutical bioprospecting (MA, 2005c).

Maintaining future options is important because future environmental conditions and needs are unpredictable, and because much biodiversity has not yet been explored. Estimates of the total number of species that exist on Earth range from 5 to 30 million, and of these fewer than 2 million species have been described (MA, 2005c). However, it is clear that both the direct use and future option values of biodiversity will increase with climate change. Adaptation to environmental hazards such as drought, pests and floods, as well as increased climatic variability, will require increased adaptability in agricultural systems. As well as providing genetic resources for adaptation, biodiversity enhances the resilience of ecosystems and hence reduces the impacts of climate related stress.

How different groups value biodiversity

Global vs local values

The values that different actors—conservationists, communities and commercial users—attribute to biodiversity may converge, but also conflict. The formal conservation community (eg. international NGOs, scientists and conservation authorities) has traditionally valued globally rare and threatened species and habitats, and charismatic fauna (see for example Brooks *et al.,* 2006). Hence, priority is given to *global biodiversity values* (which are primarily non-use values and indirect use values), as opposed to biodiversity's utilitarian value to local people (*local biodiversity values*, see Box 3). At the extreme end of the conservation community is the school of "deep ecology", which argues that intrinsic values override all other biodiversity values (Vermeulen and Koziell, 2002).

Box 3. Local biodiversity values

Agricultural biodiversity (crops and livestock, as well as insect pollinators, soil composters etc.) provides the range of bio-resources needed for food production and nutrition; enhances resilience, adaptability and long-term productivity within agricultural systems; and allows diversification of livelihoods. For communities in agriculturally marginal areas, where only a few crops can grow, a diversity of *varieties* can be vital. For example, farmers in the high Andes grow hundreds of potato varieties, each offering different nutritional and medicinal values. With the onset of climate change, many communities will need access to a greater diversity of crop varieties to meet their food and nutritional needs (Swiderska *et al.,* 2006).

Several billion people also use *wild resources;* wild meats, fish and insects provide much of their protein (over 20% of all protein in 62 developing countries), while forest fruits and vegetables provide a source of vitamins (Kaimowitz and Sheil, 2007). A large proportion of the world's population—1.6 billion people—rely on forest resources for all or part of their livelihoods (Mayers and Vermeulen, 2002); while 150 million poor people count wildlife as a valuable livelihood asset (DFID, 2002).

Ethnographic studies show that people use hundreds of species for a wide range of purposes (Kaimowitz and Sheil, 2007). A survey in India found over 10,000 wild plants used by tribal people. Of these, as many as 8,000 were used for medicinal purposes and 4,000 for food (Hitchcock, 1996).

Wild resources (eg. forest patches) can provide a critical *safety net* when staples are not available (eg. during dry seasons, drought, war and famine). In Zimbabwe, wild resources contribute 35% of total household incomes on average (Cavendish, 1997) and studies have shown that this proportion increases for the poorest households and in times of stress. A recent study in the Sahel found that the households that are most vulnerable to hazards are highly dependent on exploiting common property resources (for firewood, wild foods and medicines), particularly during drought years (Trench *et al.*, 2007). In dryland India, wildlife products provide 14-23% of total income, rising to 42-57% in times of drought (Koziell, 2000).

For many indigenous peoples, biodiversity also has *cultural and spiritual value* (Posey and Dutfield, 1996; UNEP, 1999; Koziell, 2001; Pimbert, 2003b; Swiderska, 2006). Vernacular societies believe that all parts of the natural world are infused with spirits (Posey and Dutfield, 1996) and that particular species, varieties and ecosystems are sacred. Andean Quechua people, for example, use sacred potatoes and coca leaves in rituals, and worship gods associated with sacred mountains (Swiderska, 2006; Argumedo and Pimbert, 2006). Many indigenous peoples also regard the biodiversity in their territories as part of their ancestral heritage and feel a responsibility for maintaining these resources for future generations.

Conservation programmes often focus on protecting biodiversity "hotspots" —areas with high levels of endemism and threat. Local people can often be viewed as a threat to conservation while management decisions are often guided by the precautionary principle (Vermeulen and Koziell, 2002). For example, given the choice between 100 hectares of globally rare forest, or 50 ha of that forest and 50 ha of diverse cropland, those who prioritise global values would prefer the first option even if overall levels of biodiversity (in terms of species numbers) were

identical (Vermeulen and Koziell, 2002). As this example also highlights, most conservation organisations are more interested in "natural" rather than cultivated ecosystems, regardless of diversity value. They tend not to focus on managed landscapes that conserve both agricultural and wild biodiversity, and overlook the positive role that local people can play in conserving biodiversity. Yet there is evidence to show that even pristine "wilderness" areas (eg. in the Amazon) have in fact been inhabited and managed by people for centuries (Pimbert, 2003a; Leach and Mearns, 1996; see Chapter 3).

To the vast majority of the world's population who are poor and rural, global biodiversity values matter, but not as much as more immediate goods and services gained from biodiversity locally (Vermeulen and Koziell, 2002). For forest dwellers, small farmers, fisherfolk, pastoralists and indigenous peoples who depend on natural resources and have few alternatives, the variety and variability of biological resources are intimately tied up with subsistence and ways of life. The poorest people are particularly dependent on biodiversity and environmental resources for livelihood security (Koziell and McNeill, 2002; Bigg, 2006; MA, 2005a).

Global conservation programmes can clash with local biodiversity values when they restrict peoples' access to resources in order to protect biodiversity. Although often perceived as a threat, many local communities use biodiversity sustainably because their livelihoods depend on it (Koziell, 2001). There is evidence that where communities depend on a resource which becomes scarce, they will take steps to ensure its conservation (eg. this has motivated many community conserved areas in India to be set up by communities of their own accord). But communities may not be motivated to conserve a species solely because it is prioritised at the international level because it is endemic, rare or endangered.

The CBD recognises the role of indigenous and local communities "embodying traditional lifestyles" in biodiversity conservation and sustainable use. The fact that conservation values form part of many indigenous cultures, practices and knowledge systems has been well documented by anthropologists (see, for example, UNEP, 1999), although some conservationists have contested this (Redford, 1991; Redford and Sanderson, 2000).

The agriculture systems of Quechua farmers, for example, have at their core a profound respect for "Mother Earth" (*Pacha Mama*) (Argumedo and Pimbert, 2006 and see Chapter 9, Part 2). Recent case studies in Peru, Panama, Kenya, India and China found that, even where traditional institutions have been weakened, belief in gods or spirits of sacred forests, mountains, rivers etc. is evident in many indigenous communities living in biodiversity-rich areas. They believe that nature must be respected in order to avoid the wrath of the gods (Swiderska *et al.*, 2006). The same studies also found a direct link between cultural preferences and prevention of biodiversity loss (for both traditional varieties and medicinal plants).

However, traditional values are becoming weaker, particularly among younger generations, due to various change processes, including loss of ancestral land and weakening of traditional institutions (Swiderska, 2006). Ironically, a key factor driving the erosion of traditional knowledge and cultural values relevant for biodiversity conservation is the alienation of indigenous territories to create state-run protected areas without adequately recognising traditional land access, and by forcibly removing peoples from their lands in some cases (CBD Secretariat, 2005a). Faced with weakened conservation values amongst local communities, conservation agencies can either seek to strengthen traditional values and institutions, or impose external management systems which further undermine them.

As Kaimowitz and Sheil (2007) point out, supporting local biodiversity values in conservation efforts does not mean that species that do not benefit the poor should be allowed to disappear. We need to find a better balance between the two. A few international conservation organisations (eg. Birdlife International) and a number of national NGOs/CBOs (eg. ANDES Peru) have fully internalised a focus on both global and local values as the end goal, based on more equitable power and benefit-sharing arrangements (Pimbert, 2003b). These "people-centred" or "pro-poor" conservation initiatives tend to involve bottom-up (ie. community-led) processes to strengthen community institutions, knowledge and rights, as opposed to top-down projects.

Market vs non-market values

Some people prioritise short-term provisioning services, which have market value, over all other biodiversity values. As the MA found, by converting natural systems to maximise the production of a few provisioning services—crops, livestock and aquaculture—we have lost many other services which are critical to our wellbeing. We are using up provisioning services such as timber, groundwater and fisheries faster than they can be replenished. Industry and state agencies for forestry, fisheries, agriculture, finance, trade, export etc., tend to see natural resources only as a source of short-term revenue, regardless of the costs to biodiversity and ecosystem services. They are backed by powerful international institutions (eg. the World Bank and International Monetary Fund—IMF) and by conventional economic models which see natural resources only as a means to fuel economic growth and which ignore the value of biodiversity and ecosystem services to wider society and future generations. Similarly, "biodiversity-blind" development work often raids nature for rapid poverty alleviation, eg. asset-stripping of forests and soils.

The private sector has become increasingly active in the biodiversity arena. The MA found that some companies are addressing biodiversity issues. However, there are a number of conflicts between the private sector and biodiversity agendas, for example around commercial use of natural resources, trade and investment; the need to share the benefits from the use of genetic resources; and the privatisation of biodiversity (eg. through intellectual property rights) *versus* biodiversity as a global public good and community resource. The pursuit of rapid economic growth and the increased influence of industry in some countries have led to a downgrading of environment regulations to facilitate private investment (eg. in India). At the same time, the potential contribution of small and medium enterprises (eg. in forestry) to protect biodiversity and reduce poverty is often overlooked (Macqueen, 2007). These issues are discussed in more detail later on.

2.4. Integrating local values into biodiversity assessments

If decisions are to better reflect the differing biodiversity values held by society, we first need to recognise these multiple values and the variations in power of those that hold them. The voice and influence of those currently marginalised from key decision-making processes need to be strengthened so that they can participate equally and negotiate trade-offs where interests diverge.

Biodiversity assessments by national and international bodies—including governments, NGOs and the private sector—are overwhelming predicated on global biodiversity values, but this bias of global over local values is seldom made explicit and is often not intended (Vermeulen and Koziell, 2002). There are perhaps two reasons for this: (1) the strong influence of the international conservation lobby; and (2) the absence of good information on local biodiversity values and good methods to assess them: "local biodiversity values, of all kinds, remain poorly documented and poorly represented in the global political arena" (Vermeulen and Koziell, 2002). Furthermore, assessments conducted by different actors and at different scales tend not to be co-ordinated; hence local values are often overlooked in scientific and policy assessments, while global scientific values may be absent from local resource assessments.

During the l990s, big conservation NGOs adopted a focus on large-scale conservation strategies, re-emphasising a scientific approach to conservation (ie. global values), in some cases replacing previous notions of working with local communities (Adams and Hutton, 2007). The conservation community remains largely divided between those who believe that responses must be based on rigorous science alone, and those who see understanding social realities and engaging local people as a practical necessity (Chapin, 2004). However, Adams and Hutton (*op cit*) note that creative attempts to bridge the disciplinary gulf between natural and social scientists are being made on both sides.

As the MA concluded, combining local and scientific knowledge "becomes absolutely critical for addressing ways of managing ecosystems" (MA, 2005b). While the validity of local knowledge is sometimes questioned, it is worth noting that there are also huge uncertainties in our scientific understanding of biodiversity. Estimates of the rate of species extinction vary widely and are based on incomplete data. Similarly, our scientific knowledge about ecosystem functioning, soil processes, etc. is very patchy. Furthermore, natural science is a social construct or "way

of knowing" which reflects Western society's reductionist understanding of nature. Vernacular societies have their own distinct ways of understanding nature and its complexity which reflect their holistic worldviews and direct dependence on nature. Their knowledge systems, evolved over millennia, are just as valid.

The CBD's 2010 target[9] aims to significantly reduce the rate of biodiversity loss at global, regional and national levels as a contribution to poverty alleviation. Although the CBD's indicators are fully scaleable, ie. they can be used to assess progress at any sub-global scale, they were identified to assess progress primarily at the global level. There seems to be no requirement to assess biodiversity loss at local level or use local knowledge and data sets developed by communities (CBD Secretariat, 2005b). The CBD's Global Biodiversity Outlook provides a periodic assessment of progress towards the 2010 target. The second outlook (CBD Secretariat, 2006) shows that the weakest data sets relate to trends in genetic diversity of species of socio-economic value, areas under sustainable use, and status and trends of linguistic diversity (an indicator of traditional knowledge) (CBD Secretariat, 2006).

Yet, by adopting the ecosystem approach as the primary framework for operationalising the CBD (see Box 7) governments have committed to locally driven biodiversity management. This means that while other interest groups can have their say, local roles, values, priorities, knowledge and decision-making should take the lead. Furthermore, the most direct management decisions are taken at local level, and in this sense the most useful biodiversity assessments are those based locally (Vermeulen and Koziell, 2002)

Vermeulen and Koziell (2002) identified a number of methods for integrating local and global values into biodiversity assessments (see Box 4). They concluded that the real constraint to integrating local peoples' values in biodiversity assessment is not technical. Instead it has to do with governance—giving people the space to participate in decision-making about an assessment and negotiate with other stakeholders when values differ or conflict.[10]

9 In April 2002, the Parties to the Convention committed themselves to achieve, by 2010, a significant reduction in the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth. This target was subsequently endorsed by the World Summit on Sustainable Development and the United Nations General Assembly and was incorporated as a new target under the Millennium Development Goals.

10 Adams and Hutton (2007) argue, by contrast, that the major constraint is "the disciplinary gulf that exists between predominantly natural science-trained conservation planners and predominantly social science-trained critics of conservation" and which shapes the different capacity of natural and social scientists to engage with the politics of conservation.

Box 4. Integrating local and global values in biodiversity assessment

Measures of local biodiversity values can be combined with national or global biodiversity values using methods for integrating multiple measures, such as:

- The categorisation method, which combines different criteria to give an overall value or categorisation. For example, the categorisation of hotspots combines criteria for endemism and threat. A local value, such as the contribution to food security, could be substituted or added. The categorisation method is commonly used for combining multiple global conservation values, but has not been widely applied for co-assessing global and local values.

- The equation method weights different measures according to their importance and combines them into a single index.

- The graph method plots out indices of different values separately on opposite axes, and hence keeps the trade-offs explicit.

However, without consensus among stakeholders about how measures should be derived, an index of biodiversity will always be questioned. A principles-based approach—using a set of principles which are agreed by a wide group of stakeholders but which allow local flexibility—may be well suited to biodiversity assessments which incorporate both global and local values. Principles provide the fundamental questions that an assessment needs to answer, which is a good starting point for choosing what to measure.

Source: Adapted from Vermeulen and Koziell (2002)

CHAPTER 3. GOOD GOVERNANCE

3.1. What is governance and why is it failing biodiversity and livelihoods?

Governance is about who decides and how. It has been defined as: "the interactions among structures, processes and traditions that determine how power is exercised, how decisions are taken on issues of public concern, and how citizens or other stakeholders have their say" (Graham *et al*., 2003).

Governance encompasses policies, institutions, processes and power (Box 5). The nature of governance depends on the institutional rules for decision-making and the capacity of people to participate in decision-making processes that affect them. It also depends on the distribution of power, ie. the power to make decisions with or without the consent of others.

Box 5. Policies, institutions, processes and power

Policies: include formal government policies, plans and strategies, and the laws that make them mandatory. Policy is about what organisations do, not just what they say they do, as there is often a big gap between policy pronouncements and action (Mayers and Bass, 1999). Informal or hidden goals may be pursued just as much as formal policies. Policy is not confined to governments—the private sector and local organisations can also make policies.

Institutions: are often confused with organisations—and the terms are sometimes used interchangeably. However, strictly speaking, organisations are not the same as institutions. Institutions are the rules, regulations and other long established patterns of conduct or customs through which people interact with one another. Organisations are groups of individuals—government departments, local associations, etc.—that administer this set of formal and informal rules.

Processes: policies and laws are shaped by the processes through which they are developed, implemented and reviewed. Similarly, processes determine the way institutions operate and are shaped. Decisions are influenced by both formal policy and institutional processes and less obvious/hidden processes.

Power: power determines the degree of influence that different actors can exert on policy and decision-making. Where policy is inert it is usually because powerful institutions are "sitting on it" (Mayers and Bass, 1999). Significant changes in governance require changes in the exercise of power (Macqueen and Mayers, 2006).

The policymaking process

Policy is as much about process (policymaking, implementing and reviewing) and politics as it is about content (policy statements and instruments, laws etc.). Policymaking is not neutral; it is an inherently political process. Political factors have the greatest effect on the policymaking process, from internal (or institutional) factors such as government structures, capacity, incentives and attitudes; to the political context of the country and the external influence of international politics (Chowdhury *et al*., 2006). Policy is based on value judgements—there is no absolute right or wrong.

A recurring theme in the processes of policymaking and implementing is the way some people are involved while others are not (Mayers and Bass, 1999). Policy is often in the hands of rich and powerful actors (eg. elites, politicians, consultants and private interests). Civil society has an important role to play as a participant and as the main beneficiary of policies, but tends to have little influence over policy. In particular, local people, who have the potential to deliver good natural resource management (ie. the knowledge and motivation), are often marginalised from policy processes (Mayers and Bass, 1999).

Furthermore, policies and laws may be unevenly enforced to serve the interests of more powerful actors. Commonly, forest management laws which restrict forest access and use by local communities and give preferential access to large-scale forestry and/or tourism enterprises, are applied more vigorously than measures that recognise community rights (Tacconi, 2004; WRI *et al*., 2005).

Current governance routinely excludes poor people from environmental assets and encourages the abuse of open-access assets (Macqueen and Mayers, 2006; WRI *et al.,* 2005). In many cases, rural communities have become so disempowered that they are no longer in charge of managing their natural resources, and are not trusted by the state bureaucracies to do so (Borrini-Feyerabend *et al*., 2004a). Biodiversity conservation policies have tended to reinforce colonial processes of centralising resource control and weakening community stewardship.

Policy studies and guidelines on biodiversity planning have emphasised the importance of policy as a cyclical learning process, informed by on the ground realities and experience, and regularly reviewed to reflect new evidence and perspectives (Mayers and Bass, 1999; WRI, 1995). Policy and plans should not be separated from practice. Instead they should be linked to it—we need to "unite decision-making with its consequences" (Mayers and Bass, 1999).

In terms of priorities for future work, policy studies have emphasised the need for action research which can help establish more inclusive governance processes:

> *"the type of work now needed is collaboration on analysis and institutional change with those who are currently marginalised from the policy process, so that they can present their views and experience, and make their claims, more effectively. In a sense, this means turning the conventional approach on its head, ie. we need more policy process challenges for the powerful, and policy content analysis for the marginalised"*
> (Mayers and Bass, 1999).

Unhelpful myths about conservation and development

Many policies and policymaking processes are guided by the conventional conservation paradigm, which assumes that local people destroy biodiversity to meet their needs because they are poor (Farvar, 2006). This notion is often linked to fears of population pressure, and mistrust and lack of understanding of local societies. It leads to responses which alienate local people from their resources, setting them against conservation efforts and forcing them to poach wildlife, hence creating a self-fulfilling prophecy. In some cases, such as Nepal's Royal Chitwan National Park, protective regimes persist because they are supported by elites who gain from them (Thoms, 2006). Thus, while communities may be excluded from resources in parks, commercial ventures may be allowed in.

Yet there is evidence to show that poor people in biodiversity rich areas are both able and motivated to conserve biodiversity when they are allowed to play an active role in shaping conservation initiatives and have secure rights to resources. Experience over the last two decades also shows that poor people can and do adapt their resource management practices to conditions of resource degradation and rising population (Swiderska, 2004a; Reed, 2001). While it is true in Africa, for example, that most of the farmers who deforest *are* poor, it is far from clear that African farmers deforest *because* they are poor. Recent research in Africa and elsewhere shows that market and policy changes are far more important drivers of deforestation (Gutman, 2001). Furthermore, wealth rather than poverty is the main cause of both environmental problems and the persistence of poverty, by fuelling excessive consumption of natural resources at the expense of local access (Weber, 2006; Swiderska, 2004a). The MA's focus on ecosystem services for human wellbeing has started to shift the conventional paradigm of conservation *from* people to one of conservation *for* people.

Certain paradigms may become dominant and persist over time because they support the interests of more powerful groups (ie. governments and elites), even if hard evidence for their apparent value is lacking. A growing body of evidence shows that much conventional wisdom on environmental change—eg. on overgrazing, desertification, the woodfuel "crisis", rapid and recent removal of pristine forests, and natural resource degradation caused by rapid growth in population—may be deeply misleading (Leach and Mearns, 1996). For example, while it has

always been thought that Guinea's forest-savanna zone used to be completely forested and has been degraded by farmers, Leach and Fairhead (1994) provided evidence to show that many aspects of local farming and resource use served to increase forest cover. Similarly, Brockington and Homewood (1996) found that fears of soil erosion and environmental degradation by Africans were exaggerated to meet political ends and justify allocating more land to white settlers. Box 6 further illustrates this point, highlighting the controversy over the co-existence of pastoralists and wildlife in Africa.

Box 6. Pastoralists: ecological vandals or good stewards?

For many years, mainstream views have held that African pastoralists allow their livestock to overgraze and that their husbandry increases soil erosion—the so-called "tragedy of the commons". Because they are assumed to be dangerous to wildlife, pastoralists are often excluded from parks and reserves in order to protect their resources and associated tourism and hunting industries (Brockington and Homewood, 1996).

The notion of limited "carrying capacity" is sometimes used to justify the exclusion of pastoralists from wildlife protected areas (eg. in Africa and India). In the Ngorongoro Reserve in Tanzania, for example, the carrying capacity concept was used to show that there were too many animals and people in the area and to justify the eviction of people. The carrying capacity approach was, however, developed in North America, where conditions are fairly stable and grazing pressure (and hence stocking levels) is the main limiting factor affecting the sustainability of plant ecosystems. By contrast, dryland ecosystems are much less uniform and resource distribution is more affected by the unpredictable rainfall rather than grazing pressure. For pastoral communities, the concept of being allowed to keep x number of "livestock units" in a given area is somewhat bizarre. They view carrying capacity differently—as opportunistic carrying capacity, based on high mobility according to rainfall, the use of mixed herds, social relations and negotiation to access resources. This response to unpredictability has been overlooked by many policy and planning tools (Swiderska, 2003).

The development community has its own persistent paradigms that are equally unhelpful. The dominant neoliberal economic paradigm, for example, assumes that only national economic growth will reduce poverty, and that this will occur automatically over time through benefits "trickling down". This is the justification for unsustainable resource exploitation: to fuel "national" economic growth regardless of impacts on local livelihoods and biodiversity. However, while this model generates wealth for elites and middle classes, it often does little to help the poorest and most vulnerable groups in society, who may be made worse off as their land and resources are taken away. Furthermore, it assumes that free markets will deliver the fairest outcome to society, without the need for regulations to correct social and environmental failures (Koziell, 2001). As well as generating many of the direct drivers of biodiversity loss, this model has led to macro-economic and structural adjustment reforms, such as the removal of agriculture subsidies, which have increased poverty and environmental degradation in Africa, and have only served the interests of OECD countries (Koziell, 2001; MA, 2005a).

While there is much that can be learned from traditional knowledge about, and approaches to, resource conservation, so we can also learn from different economic paradigms. While Western economic models promote private accumulation of wealth and property for profit, traditional societies often promote social equity and ecological sustainability based on principles of reciprocity and collective custodianship. Traditional economies which often exist alongside monetary economies can be vital for sustaining the livelihoods of the poorest groups and biodiverse production systems (Marti and Pimbert, 2006). Yet, these informal non-monetary economies based on customary values are being eroded by dominant Western economic paradigms, and are rarely supported by either development or conservation initiatives.

The exclusionary protected area model

The dominance of the paradigms described above has led to protected areas becoming central to global efforts for biodiversity conservation. Today protected areas cover nearly 12% of the world's land area (Chape *et al*., 2003) and 14% of the world's surface.

It is often overlooked that the International Union for Conservation of Nature (IUCN) actually identifies six different types of protected areas based on their management approach. These range from strictly protected (Category I) to those that emphasise sustainable use (Category VI). Nevertheless the dominant model across the developing world is based on the US model of the late nineteenth century that separates people from nature and strives to create and maintain a pristine "wilderness". Post-colonial governments maintained this protectionist approach, with centralised government institutions taking ownership of wildlife and forests, both within and outside protected areas (Kothari and Pathak, 2006a).

The growth in national parks and protected areas has been quite rapid over the last three decades—from covering under 3 million km2 in 1970 to over 20 million km^2 in 2004 (Kothari and Pathak, 2006b). Around 34.5% of the total area protected is under IUCN's more strictly protected categories I and II (Scherl *et al*., 2004).[11] In some of the poorest countries, protected areas make up a large proportion of land—as high as 40% in Tanzania and Zambia (Scherl et al., 2004). This could mean a significant opportunity cost in terms of other land and resource use foregone (depending on the categories of PAs and the extent of competing land uses they preclude). As *most* protected areas in the world have people residing within them or dependent on them for their livelihoods, the conventional exclusionary approaches have engendered profound social costs (Borrini-Feyerabend *et al* 2004b; IUCN, 2003). Indeed, a number of protected areas have impoverished the communities living in and around them, including some of the world's poorest and most vulnerable, who have been denied access to traditional resources for food gathering, grazing, water, etc. (Borrini-Feyerabend *et al*., 2004b; Cernea and Schmit-Soltau, 2003; McShane, 2003; Colchester, 2004; Pimbert and Pretty, 1995).

The residents of protected areas have often been expelled or are severely restricted in what they can use, but without any compensation (Borrini-Feyerabend *et al*., 2004b; Pimbert, 2003a). For example, by 1993 protected areas in India had displaced some 600,000 tribal people, equivalent to about 20% of the country's tribal population (Pimbert and Pretty, 1995). As well as losing their livelihoods, local communities have been disempowered when control of land and resources has been taken over by governments or private corporations (Borrini-Feyerabend *et al*., 2004b). Recently, the World Bank has recognised diverse restrictions on livelihoods as a form of displacement, since "land is livelihood and identity" (Cernea, 2006). This has crucial implications for protected area policies. However, the nature and extent of social impacts associated with protected areas are disputed. While there is field evidence to show that protected areas have harmed some of the world's poorest, a global overview of displacement from protected areas (Brockington and Igoe, 2006) highlighted a surprising dearth of sound information which prevents any full and balanced assessment of their impacts.

Pressure continues to expand protected area coverage further. This comes partly from the CBD Programme of Work on Protected Areas (PoWPA), which seeks to improve representation of habitats and species under protection, and also from conservation NGOs keen to link habitats together with corridors to reduce the impacts of climate change. Given the social impacts of exclusionary protected areas discussed above, this trend towards further expansion should (and increasingly does) make use of different governance models, including managed agricultural landscapes and community conserved areas, to avoid such negative impacts (see for example Jareith and Smyth, 2003; Borrini-Feyerabend, 2003).

3.2. What kind of governance do we need?

For several decades the international community has insisted on good governance as a key condition for development co-operation—especially democratically elected governments, tackling corruption and ensuring the rule of law. But people's perceptions of good governance vary. For example, some emphasise the role of the state and top-down models (eg. strict law enforcement). Others emphasise the importance of "empowering civil society in decision-making and democratising government institutions and structures, and markets" and state that respect of human rights is "the most basic criterion for 'good governance'" (Borrini-Feyerabend *et al*., 2004a).

11 Conversely, over half of all Category V sites—which encourage integration of local users—are located in Europe, with far fewer in developing countries (Pimbert, 2003a).

Experience with natural resource governance—in forestry, agriculture and co-management of natural resources—has emphasised the following good governance attributes and lessons.[12] These are designed to maximise benefits for both natural resources and livelihoods and equally apply to biodiversity governance.

Stakeholder participation

Local people have valuable site-specific knowledge to complement that of natural resource "experts" (Carter and Gronow, 2005). Those most vulnerable to environmental issues—ie. local actors and the poor—are usually best placed to perceive them (Macqueen and Mayers, 2006). It is therefore critical that their voice informs all levels of environmental governance, from local to international. At the same time, the evidence required to substantiate local perceptions may need to be gathered by non-local agencies. While some responses need to be developed at national and international level, these should still be informed by and accountable to local actors (Macqueen and Mayers, 2006).

Participation of local biodiversity managers is critical to identify synergies between global and local values and negotiate trade-offs where the two cannot be reconciled, to distribute the costs and benefits of conservation fairly, to improve recognition of the role of local biodiversity managers and institutions and to improve the transparency and accountability of governance institutions to local biodiversity managers.

But in most cases, rural communities in biodiversity-rich areas have little if any influence over local, national or international biodiversity decisions that affect them, and their role as actual or potential biodiversity managers is largely unrecognised. They often face the additional challenge of being far removed from policy fora in capital cities. For example, at a workshop for community-based organisations in East Africa, maps of stakeholder influence on forest and protected area policies showed local communities to be the largest stakeholder group with the greatest potential for good biodiversity management, and yet by far the least influential.[13] Being more inclusive of local resource managers (eg. communities and park wardens) is important both to promote equity and to enable learning from practical experience (IUCN, 2003). Enabling local people to have a say in biodiversity decisions often requires steps to improve access to information, build counterveiling power, and strengthen the political voice of marginalised groups.

Participation is a fundamental principle of good governance which underlies many others, but the term has been used and misused to mean different things. It is important to distinguish between consultation and passive participation (where there is no obligation to take people's views into account), and active participation (where people actually have an influence on the outcome of the decision). In Africa, for example, a civil society organisation may be invited to join a policy debate, but often only when the government has already made up its mind (Chowdhury *et al*., 2006). Where there are big differences in power amongst stakeholders, proactive measures are needed to ensure that the less powerful actors can actively participate in decisions, rather than just legitimising existing inequitable processes.

Mayers and Bass (1999) identify the need for "a forum and participation process" to help achieve good policy. The process helps to understand multiple perspectives and needs, negotiate between the needs of wider society and local actors, and initiate partnerships.

Representative democracy has often failed to represent people adequately in governance, which means that additional spaces may need to be created for direct participation (eg. citizens' juries). Participation has a cost, both to those participating (time, travel etc.) and to those seeking participation of others. "If the process is too broad-ranging it will be unworkable; too narrow and the ideas will be the wrong ones" (Mayers and Bass, 1999). In South Africa's newly democratic era, policy processes went all out to consult the people, but this led to "consultation fatigue" amongst civil society. The process to develop South Africa's National Biodiversity Policy in 1997 struck

12 This section draws in particular on a review of governance lessons by IIED for Norad: Environmental Governance: Implications for donors from the practice of governance in agriculture, forestry and urban development (Macqueen and Mayers, 2006); IIED's study on Policy that Works for Forests and People (Mayers and Bass, 1999); and Sharing Power: Learning by doing in co-management of natural resources throughout the world (Borrini-Feyerabend et al., 2004a).

13 *Learning from Community Action to Realize the MDGs*, Equator Initiative, Nairobi,18-23 July 2003.

a balance between securing scientific and expert input, and all-out participation by civil society and grassroots organisations (Wynberg and Swiderska, 2001).

Donors have an important role to play in financing the participation of dispersed rural groups in policy dialogues; in supporting the formation of representative local institutions, regional federations and networks that can proactively engage in policy and exert counter-veiling power; and in convincing governments of the need to open up policy debates (Chowdhury *et al*., 2006).

At the local level, platforms that bring relevant actors together are key in mobilising capacity for social learning, negotiation and collective action. Adaptive management is best mediated by local groups that co-ordinate planning and action. Examples of such local platforms include village forest committees, farmer field schools, local fishing associations and user groups of various kinds (Macqueen and Mayers, 2006). At national or international level such platforms include multi-stakeholder dialogues or policy fora. For example, Brazil has set up a national council on forests to define the direction of forest policy, which includes indigenous representatives (Azevedo, 2004).

Equity

Equity is not necessarily the same as equality. Equity implies a recognition of *rights*-holders as the primary decision-makers, as distinct from *stake*holders. For example, those with the greatest dependence on and historical connection with an area and its biodiversity and who have made the greatest contribution to conserving and enhancing it, may be considered rights-holders. The unique entitlements of indigenous and local communities mean that they are more akin to rights-holders than stakeholders (Borrini-Feyerabend *et al.*, 2004a). The issues of who pays the costs of conserving biodiversity and whether communities should be expected to perform a function that is for the wider good without direct compensation, are only now being seriously considered (Carter and Gronow, 2005).

For decisions to be equitable, it may be necessary to empower marginalised groups and curb the power of others to level the playing field. One way to build counterveiling power is through the regional federation of representative organisations of local natural resource managers. Equity can also be promoted through measures to secure the rights of people and communities, enhance social and economic benefits, and combat poverty and exclusion (Borrini-Feyerabend *et al*., 2004a).

Accountability

Accountability is critical to ensure that governments and governance serve the needs of society, and that participation in decision-making is meaningful (ie. followed up with actions). Accountability is likely to improve when local officials are elected directly by local people rather than being appointed by central government institutions, but this on its own may not be enough. Co-management of natural resources provides a way to institutionalise accountability as it entails negotiated agreements on management roles, rights and responsibilities amongst different actors (Macqueen and Mayers, 2006; Borrini-Feyerabend *et al*., 2004a).

Where issues need to be addressed at national and international levels, appropriate bodies to manage solutions may or may not include local actors themselves, but should certainly be informed by and accountable to local actors (Macqueen and Mayers, 2006). Currently, the accountability of national and inter-governmental institutions dealing with biodiversity and natural resources to local actors is minimal. Often accountability is only top-down—eg. donors or governments holding local organisations to account—as opposed to bottom-up or two-way.

Transparency and information flows

Lack of transparency and access to information about decisions and decision-making processes is a key obstacle to participation and accountability. It often goes hand in hand with corruption, which reduces the already limited resources available for biodiversity and rural livelihoods. Transparency is increasingly important as globalisation unleashes new pressures and dynamics at the local level and as the power of the private sector grows. Opaque

decision-making enables active collusion between parts of government and corporations, often to the detriment of sound environmental management and the rights and livelihoods of the poorest groups.

Governance institutions should also be open to external information from all sources and should promote good information flows between institutions at different levels— local, regional, national (ie. vertically) and between sectors (horizontally). Furthermore, they should be transparent about what information they use and don't use. The active communication of the information used in policymaking and information on policy impacts "are vital processes for empowering effective forest stewardship" (Mayers and Bass, 1999). As a review of co-management of natural resources noted, "in any given society it is important to ask whose perspectives, knowledge and aspirations are embedded in policies, and whose are excluded" (Borrini-Feyerabend *et al*., 2004a). While good, timely and well-presented evidence can help civil society influence policy, the credibility of civil society organisations and their ability to provide sound analysis is often questioned by policymakers (Chowdhury *et al*., 2006). At the same time, elites such as politicians, can play a potentially pivotal role as conduits of experiential knowledge into policy processes (Grant *et al*., 2006).

Decentralisation

Decisions are best made "where potential contributions for sustainability are greatest"; in other words where there is capacity to act and monitor and the trade-offs are well understood (Mayers and Bass, 1999). While centralised planning and large-scale top-down projects may be effective in delivering some public services like education and health, this is rarely the case with the administration of natural resources and land. The local variability, complexity and unpredictability of natural ecosystems mean that flexible responses and local-level adaptive management are needed, in which farmers, pastoralists, fisherfolk and forest dwellers are central actors in analysis, planning, negotiation and action (Macqueen and Mayers, 2006; Borrini-Feyerabend *et al*., 2004a).

Over the last decade, many countries have initiated decentralisation programmes for natural resources which provide potential opportunities for co-management arrangements with local resource users to emerge. However, in many cases, decentralisation of decision-making has not been accompanied by a corresponding strengthening of institutional capacity (staff, training, funds etc.) at the periphery. Furthermore, devolution to local people implies giving up decision-making power, recognising the validity of local knowledge and management, and a change in the role of the state. "This is often a painful process, and its results cannot be guaranteed", so experimentation is generally the best way forward (Mayers and Bass, 1999). A further challenge is to decentralise while avoiding corruption at decentralised levels. Thus, governments need to be very transparent to enable effective decentralisation (Azevedo, 2004).

Efficiency and effectiveness

This means that governance makes the best use of available resources, institutions and capacity for sound resource management. Wasteful or ineffective interventions diminish resources available for more appropriate responses (Macqueen and Mayers, 2006). The best way of ensuring that environmental governance is efficient and effective is to base interventions on a sound analysis of the local situation, rather than using "received wisdom". For example, many interventions vastly underestimate the importance of informal non-monetary economies based on reciprocity and barter, which often exist alongside monetary economies. Such non-monetary exchanges are particularly important for sustaining the livelihoods of the poorest people and their traditional production systems, values and ways of life that conserve biodiversity (eg. barter markets in the Peruvian Andes; see Marti and Pimbert, 2006).

Other examples of efficiency and effectiveness include:

- Engaging all those with a role in implementation: many national environmental action plans, forestry action plans, sustainable development strategies etc., have not been effectively implemented because they were developed by external consultants rather than the broad set of in-country stakeholders who are meant to implement them.

- Enhancing *coherence* across government interventions, so that the policies and investments by one department do not undermine those of another. Investments in environmental assets may have little impact if other ministries (rural development, agriculture, finance, forestry etc.) are promoting their degradation, and such uncoordinated action raises the total cost of tackling problems. Greater coherence is also needed between different natural resource policies—forests, water, soils, agriculture and so on. These are often developed and implemented separately and without synergy even though in practice rural livelihoods depend on all of these "sectors" in any given place and point in time.

Direction and timeliness

This means using solid evidence about reality on the ground and timeframes that allow meaningful participation by stakeholders (Macqueen and Mayers, 2006). Externally-imposed environmental governance regimes are often based on standardisation, centralisation and one-size fits all approaches which neglect local dynamic complexity and heterogeneity. Instead they should focus on the goods and services needed by stakeholders (Mayers and Bass, 1999) and should be broad and flexible enough to accommodate local diversity and change (Macqueen and Mayers, 2006).

Learning and experimentation

Building flexibility into governance is critical to enable responsiveness and learning from experience (Macqueen and Mayers, 2006). As our knowledge of nature is imperfect, so too is our understanding of how best to manage it. Therefore, experimenting with different management approaches, assessing their impacts and feeding back the lessons to inform policy is particularly important for the management of natural resources. But such experiments are only really useful if they can capture the attention and support of those who control policy, thus leading to changes in policies and institutions (Mayers and Bass, 1999).

"Learning by doing" is sometimes used to describe the evolution of agreements for the co-management of natural resources. There is no set model for co-management—what works is highly context-specific and our knowledge is still evolving. In their book *Sharing Power: Learning by doing in co-management of natural resources throughout the world*, Borrini-Feyerabend *et al.* (2004a) stress that "'adaptive management' is the only sensible approach" given that widespread environmental and social change (climate change, over-exploitation, pollution etc.) are adding to the inherent uncertainty and complexity of ecosystems. Adaptive management emphasises on-going learning through iterative processes to fit solutions to specific contexts. It is based on systematic experimentation and analysis of feedback to policies and management interventions. Social actors involved in co-management typically act as innovators, trying out novel solutions to problems. The more co-management actors invest in joint learning, the more their collaboration will be relevant and effective.

3.3. Promoting good governance in biodiversity conservation

Many of the good governance principles described above have been recognised in existing international-level initiatives, such as the CBD's ecosystem approach and its Programme of Work on Protected Areas, the Millennium Ecosystem Assessment and the IUCN World Parks Congresses. The first two of these are summarised below. The remaining chapters in Part 1 then look at how these governance principles can be implemented at local, national and international levels.

The CBD's ecosystem approach

The CBD's ecosystem approach (Box 7) is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is intended to implement all three objectives of the CBD, and was adopted by Parties as "the primary framework for action under the Convention" in 2000 (decision V/6). It emphasises many of the good governance principles set out above, providing valuable guidance for effective governance of biodiversity. The ecosystem approach seeks to balance different interests in society: local and global values, conservation and development. Its first two principles are particularly notable

in terms of the preceding discussion on biodiversity governance: (1) that the objectives of NRM are a matter of societal choice; and (2) that management should be decentralised to the lowest appropriate level.

Box 7. The 12 principles of the ecosystem approach

The ecosystem approach comprises the following 12 principles—the rationale is included for the first two principles:

Principle 1. The objectives of management of land, water and living resources are a matter of societal choice. Rationale: Different sectors of society view ecosystems in terms of their own economic, cultural and societal needs. Indigenous peoples and other local communities living on the land are important stakeholders and their rights and interests should be recognised. Both cultural and biological diversity are central components of the ecosystem approach, and management should take this into account.

Principle 2. Management should be decentralised to the lowest appropriate level. Rationale: Decentralised systems may lead to greater efficiency, effectiveness and equity. Management should involve all stakeholders and balance local interests with the wider public interest. The closer management is to the ecosystem, the greater the responsibility, ownership, accountability, participation and use of local knowledge.

Principle 3. Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.

Principle 4. Recognising potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Management should: reduce market distortions that adversely affect biodiversity; align incentives to promote biodiversity conservation and sustainable use; and internalise costs and benefits in the given ecosystem to the extent feasible.

Principle 5. Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.

Principle 6. Ecosystems must be managed within the limits of their functioning.

Principle 7. The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.

Principle 8. Recognising the varying temporal scales and lag-effects that characterise ecosystem processes, objectives for ecosystem management should be set for the long term.

Principle 9. Management must recognise that change is inevitable.

Principle 10. The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biodiversity.

Principle 11. The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.

Principle 12. The ecosystem approach should involve all relevant sectors of society and scientific disciplines.

Source: CBD Secretariat, 2000

There is no single way to implement the ecosystem approach, as it depends on local, provincial, national, regional or global conditions and does not preclude other management and conservation approaches, such as biosphere reserves, protected areas, and single-species conservation programmes, or other approaches carried out under

existing national policy and legislative frameworks. The operational guidance provided by the CBD (CBD Secretariat, 2000) would enhance biodiversity conservation in any context:

- *Focus on functional relationships and processes within ecosystems:* a much better understanding of ecosystem function and structure and the role of biodiversity in ecosystems is needed.

- *Enhance benefit-sharing:* especially with those responsible for the benefits that flow from the functions that biodiversity provides at ecosystem level, so that these benefits are maintained, including through proper valuation of ecosystem goods and services, removal of perverse incentives that devalue them, and their replacement with local incentives for good management.

- *Use adaptive management practices:* including local learning processes and flexible policymaking and implementation, because ecosystems are complex, variable and uncertain.

- *Carry out management actions at the scale appropriate for the issue being addressed, with decentralisation to the lowest scale, as appropriate*. Often this approach will imply decentralisation to the level of local communities. Effective decentralisation requires proper empowerment, which means that the stakeholder has both the opportunity to assume responsibility and the capacity to carry out the appropriate action, and needs to be supported by enabling policy and legislative frameworks.

- *Ensure intersectoral cooperation*: there is a need to integrate the ecosystem approach into agriculture, fisheries, forestry and other production systems that have an effect on biodiversity. Management of natural resources calls for increased intersectoral communication and co-operation at a range of levels (government ministries, management agencies, etc.). This might be promoted through, for example, the formation of inter-ministerial bodies within the government or the creation of networks for sharing information and experience.

The Millennium Ecosystem Assessment

The MA has been identified as a useful framework for assisting implementation of the CBD's ecosystem approach and provides some interesting insights into biodiversity governance (MA, 2005a; MA, 2005b):

- *Protected areas:* the MA concluded that protected areas are extremely important for conservation, but need to be better located, designed and managed. It recognised that protected areas may increase poverty where rural people are excluded from resources that have traditionally supported their wellbeing, but they can also improve livelihoods when managed to benefit local people. Protected area success depends on a collaborative management approach between government and stakeholders, an adaptive approach that tests management in the field, and "empowerment of local communities through an open and transparent system that clarifies access and ownership of resources".

- *Local rights and benefit capture:* the MA recognises that many success stories have involved transferring rights to own and manage ecosystem services to individuals, which provides incentives for communities to conserve biodiversity. But adequate institutional commitment is needed to ensure that devolution of rights is realised and sustained. At the same time, the MA recognises the challenges in capturing local benefits: "While 'win-win' opportunities for biodiversity conservation and local community benefits do exist, local communities can often achieve greater economic benefits from actions that lead to biodiversity loss."

- *The need for governance at all levels:* the MA stresses the need for supportive national laws and policies to provide the security of tenure and authority at lower levels essential to providing incentives for sustainable management. This, together with strong institutions at all levels, is the key to success in decentralising biodiversity management to the lowest appropriate level. Functions that subordinate organisations perform effectively should be decentralised to them because they have the best information, while central organisations should provide support, co-ordination and communications. Existing local practices and institutions that work need to be supported and strengthened. In many countries, these local practices may be much stronger than

formal laws. Since these customs and customary rights are embedded in local societies, changing them through external incentive schemes is very difficult.

- *Stakeholder participation:* "Laws, policies, institutions and markets that have been shaped through public participation in decision-making are more likely to be effective and perceived as just". Stakeholder participation improves decision-making by allowing better understanding of impacts and vulnerability, the distribution of costs and benefits associated with trade-offs and the identification of a broader range of responses. Increasing transparency of decision-making can increase accountability and reduce corruption.

- *Mainstreaming biodiversity:* "biodiversity will only be conserved and sustainably used when it becomes a mainstream concern of production sectors". Integrating biodiversity issues into agriculture, fishery and forestry management encourages sustainable harvesting and minimises negative impacts on biodiversity. Biodiversity should be integrated into fiscal policy, including through the "elimination of subsidies that promote excessive use of specific ecosystem services". For example, agricultural subsidies in industrial countries reduce prices for many commodities, encouraging Southern countries to adopt unsustainable agriculture practices that destroy ecosystems and push many poor farmers into poverty. Poverty reduction strategies (PRSPs) developed in recent years have largely failed to integrate ecosystems and their services. The focus of such strategies is generally on institutional and macroeconomic stability, yet many of the structural adjustment programmes of the 1980s caused degradation of ecosystems and deepened poverty in many developing countries.

- *Correcting market failures:* because many ecosystem services are not traded in markets, markets fail to provide appropriate signals that might contribute to their sustainable use. Thus, there is a need for "correction of market failures and internalisation of environmental externalities that lead to ecosystem degradation".

- *International biodiversity governance:* There is a need to:

  (1) Increase commitment to implementing the multilateral environment agreements (MEAs, for example the CBD). Currently, impacts at policy and practical level depend on the will of contracting parties. The lack of compulsory jurisdiction for dispute resolution is a major weakness in international environmental law.

  (2) Strengthen co-ordination among MEAs and between them and the more politically powerful international institutions, such as economic and trade agreements of the WTO, to ensure they are not undermining one another.

Equity and diversity in protected area governance

Concern about the negative social impacts of protected areas has brought calls for equity in the governance of protected areas, and for recognition of a wider range of biodiversity governance approaches, including site specific responses designed with local people (Borrini-Feyerabend *et al*., 2004b; Roe and Elliot, 2006). In practice, there is a continuum of governance approaches from exclusive (exclusion from a protected area governing body) to inclusive (where the interests of local communities and their involvement in management planning are central to the protected area, Borrini-Feyerabend *et al*., 2004b). Many conflicts between protected areas and communities could be avoided and replaced by constructive co-operation if communities were recognised as rightful managers or co-managers of natural resources (Borrini-Feyerabend *et al*., 2004b). In India's Periyar Tiger Reserve, for example, a participatory approach and respect for customary rights have resulted in a significant decline in poaching and much better relations with communities (Kothari and Pathak, 2006a).

In some contexts, strict protection and law enforcement may be the only feasible way to conserve threatened species, eg. in the case of a small habitat containing rare species surrounded by intensive agriculture (Hulme and Murphree, 2001). Where this is the case, equity requires that local people should be fully compensated for the loss of livelihoods they may suffer (both loss of access to land/resources and increased human-wildlife conflicts such as crop damage). But in other cases, eg. where communities are sustainably managing natural resources as part

of their livelihoods, co-management or community-based conservation may be the best approach. The validity of a diversity of governance types should be recognised, along with the danger of "one size fits all" responses. Decisions about *who* manages the resources, *how* and *why*, should depend on the local situation rather than uniform national legal requirements (Roe and Bond, 2007).

Where biodiversity resources are under communal ownership, in many cases indigenous and local communities are voluntarily managing and conserving them. There are many instances around the world of communities managing and conserving important biodiversity of their own accord, based on traditional or "modern" practices. A number of indigenous groups have set up successful "protected areas" of their own accord (eg. in Brazil, Ecuador, Costa Rica and Colombia) to protect land *for* local use rather than *from* use (Pimbert, 2003a; Alcorn *et al*., 2006). Recent research in Brazil based on satellite imagery has shown that indigenous reserves prevent deforestation as effectively as national protected areas (Nepstad *et al*., 2006). Yet these community conserved areas receive very little official recognition, legal backing or financial support, and are rarely recognised as part of national systems of protected areas. Recognising community conserved areas alongside government and co-managed protected areas is important for conservation as localised results can be linked, harmonised and combined to enrich one another overall (Borrini-Feyerabend *et al*., 2004b).

The Fifth World Parks Congress in Durban (2003) and the CBD's 7th Conference of the Parties (COP 7, 2004) both called for a flexible approach to management rules for protected areas, tailored to their ecological and social context. The congress developed a set of "good governance" principles for effective and equitable management of protected areas, including (Borrini-Feyerabend *et al*., 2004b):

- *Legitimacy and voice:* ensuring the capacity of men and women to influence decisions.
- *Subsidiarity:* attributing management authority and responsibility to the institutions closest to the resources at stake.
- *Fairness:* sharing equitably the costs and benefits of conservation and providing a recourse to impartial judgement in case of conflict.
- *Do no harm!* Making sure that the costs of conservation are not "dumped" on some weak social actors without compensation.
- *Direction*: establishing long-term conservation objectives grounded in an appreciation of ecological, historical, social and cultural complexities.
- *Performance:* meeting the needs and concerns of all stakeholders while making wise use of resources.
- *Accountability:* having clearly demarcated lines of responsibility and ensuring a transparent flow of information about processes and institutions.

The emphasis the 5th World Parks Congress placed on governance resulted in the CBD COP7 adopting Element 2 on "Governance, Equity, Participation and Benefit-Sharing" in its Programme of Work on Protected Areas (PoWPA). The PoWPA requests parties to improve patterns of accountability and urges them to recognise various protected area (PA) governance types. It establishes the need for prior informed consent before any indigenous community is relocated for PA establishment. It also requests participatory planning and the involvement of all stakeholders, stressing the need to appreciate local knowledge and sustainable use and the needs, practices and values of indigenous and local communities. Finally, the PoWPA calls for a more equitable distribution of the costs and benefits of conservation, particularly for indigenous and local communities (Borrini-Feyerabend *et al*., 2004b).

Borrini-Feyerabend (2008) notes that the IUCN protected areas management categories are actually neutral about governance, not prescribing any type of ownership and authority. Four broad types of governance are, however,

identified in the PoWPA, any of which could be applied to any of the six IUCN management categories depending on the specific context of an individual protected area:

1. *Government protected areas*: This is the conventional approach and still the most widespread, where a government body or parastatal is in charge of management and often owns the PA land and relevant resources. Recently regional and municipal governments have become prominent in declaring and managing PAs in line with the trend towards devolution (Borrini-Feyerabend *et al*., 2004b).

2. *Co-managed protected areas*: Shared management authority amongst various actors is also quite common, including national and local government authorities, indigenous and local communities, private landowners and NGOs. This category also includes land which has been restituted to communities but remains under protected status (eg. in Botswana and South Africa).

3. *Private protected areas*: Historically, privately owned elite hunting grounds protected wildlife; more recently NGOs have been buying large territories for conservation purposes; and many individual landowners strive to conserve the natural assets on their land.

4. *Community conserved areas*: Defined by IUCN as "natural and modified ecosystems, including significant biodiversity, ecological services and cultural values, voluntarily conserved by indigenous peoples and local and mobile communities through customary laws or other effective means". CCAs may be the oldest form of protected area governance and are still widespread. Despite their important contribution to biodiversity conservation, most are not officially recognised as part of national conservation efforts or protected area networks.

These governance types, along with the governance principles that emerged from the Durban World Parks Congress, also give effect to CBD Articles 8(j) and 10(c) which have not received much attention in conservation policy (see Chapter 6). Article 8(j) requires parties to "respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities" relevant for biodiversity conservation and sustainable use. Article 10(c) requires countries to "protect and encourage the customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements". "Customary use" and "traditional cultural practices" include indigenous legal systems for managing land and natural resources. Thus, compliance with 10(c) requires national policy and law to recognise indigenous legal systems, corresponding systems of governance and administration, land and water rights and control over sacred and cultural sites (Forest Peoples Programme, 2003; CBD Secretariat, 1997a&b).

Despite the policy rhetoric, however, there has, to date, been little demonstrable progress against the PoWPA, with few countries submitting progress reports. In particular, Element 2 has proved to be weak on implementation and as a result the IUCN World Commission on Protected Areas (WCPA) has recently established a new Taskforce on Protected Areas, Equity and Livelihoods in order to stimulate and monitor progress.

Other approaches

A number of other international agreements and instruments also provide useful principles for sustainable and equitable management of biodiversity. These include the UN Convention to Combat Desertification; agreements dealing with indigenous peoples' rights and human rights, such as ILO Convention 169 on Indigenous and Tribal Peoples and the UN Declaration on the Rights of Indigenous Peoples. These, and other agreements developed by UN agencies of the Commission on Human Rights, tend to reflect more closely the perspectives of local natural resource managers.

The Hundested Recommendations for Donor Best Practice on Indigenous Peoples and Biodiversity Governance (2001) are a useful set of principles and guidance for best practice in policy, projects and programmes, as well

as non-project assistance. They were developed at a meeting of multilateral, bilateral and private donors and indigenous representatives from Asia, Europe, the Americas, Africa and the Arctic.[14] The Code of Ethics of the International Society of Ethnobiology are also a useful set of principles for those committed to working in genuine partnership with indigenous peoples and local communities to avoid past injustices and build beneficial and harmonious relationships in the field. [15]

14 See http://www.forestpeoples.org

15 www.diversefoodsystems.org/wowcode.html. See also Posey (1996) for a number of legal and non-legal principles and agreements relating to equitable governance of biodiversity and natural resources.

CHAPTER 4. GOVERNANCE AT THE LOCAL LEVEL: COMMUNITY-BASED CONSERVATION

Over the last two decades, the exclusionary conservation approach has been increasingly questioned on both ethical, practical and conservation grounds (Pimbert, 2003a&b; Chapin, 2004; Barrow and Fabricius, 2002). A recognition of the high financial, administrative and social costs associated with "top-down" approaches to conservation—especially strictly enforced protected areas—together with an emphasis on participatory development approaches and decentralisation in the 1980s and 1990s, have brought a shift towards more decentralised and inclusive forms of biodiversity governance. People living in and around protected areas are now beginning to be viewed more as an asset for conservation than a threat, with important capacity to draw on, particularly given the often limited state resources for managing protected areas (Borrini-Feyerabend *et al*., 2004b; Jeanrenaud, 2002).

The 1980s saw the emergence of community-based conservation approaches which seek to engage local communities in management decisions, devolve rights to resources and allow sustainable use, to varying degrees. The community conservation movement really took off in the late 1980s, during which there was a growing realisation that protected areas alone were not meeting conservation objectives. With the increased prominence of human rights issues on the international agenda, there was also a growing sense that people could no longer be excluded either politically or physically from conservation and the management of natural resources.

Community-based conservation has been described as "a broad spectrum of new management arrangements by people who are not agents of the state, but who, by virtue of their collective location and activities are critically placed to shape the present and future status of these resources, so as to enhance the conservation of natural resources and the wellbeing of local people and communities" (Barrow and Murphree, 2001). Based on experiences in Africa, three categories of community conservation can be identified:

1. *Protected area outreach*: this seeks to enhance the biological integrity of parks by working to educate and benefit local communities and strengthen the role of a protected area in local planning (eg. integrated conservation and development projects, see Box 8).

2. *Collaborative management*: this aims to create agreements (between local communities or groups of resource users and conservation authorities) on negotiated access to natural resources which are usually under some form of statutory authority.

3. *Community-based natural resource management (CBNRM)*: the sustainable management of natural resources through returning control over, or responsible authority for, these resources to the community.

Local communities across the globe have managed natural resources for thousands of years. In terms of "formal" (donor-funded) conservation, however, Southern Africa was the birthplace of this "new" approach of community conservation. Here there was an almost exclusive focus on wildlife (large mammals) and trophy hunting as the mechanism for realising the economic benefits of wildlife conservation. However, it soon spread to other regions and to other resources, including forests, fisheries and medicinal plants (Roe *et al*., 2006). It is important to note, however, that the focus of these initiatives was not solely on the conservation of species and habitats. As important, if not more so, was the need for community development, local self-government, and the creation of local institutions for the management of common property resources. Renewed interest in property regimes and the description of functional common property regimes (see Ostrom, 1990) provided the necessary theoretical basis from which community conservation ideas could be developed (Fabricius, 2003). The outcome of this mix of market forces, decentralisation, rights and resources was that local-level governance was the dominant conservation and development paradigm of the 1990s.

Adams and Hulme (2001) propose five reasons why community conservation was initially so acceptable:

1. *The sustainable development agenda*: many of the aspirations of the community conservation agenda also contribute to notions of sustainable development promoted in the late 1980s and early 1990s through the Brundtland Commission and the United Nations Rio Conference (WCED, 1987; and UN, 1992).

2. *Notions of decentralisation and community*: the theory and practice of community conservation evolved in parallel with ideas that central planning and top-down technocratic approaches in general were seriously flawed. Community conservation approaches, which stressed devolution of authority, provided a strong and rational alternative to central planning.

3. *Changing development discourses*: during the 1990s, the major development discourses were also changing. There was greater emphasis on bottom-up approaches, and the value of small locally-grounded initiatives over large-scale projects. These ideas served to reinforce the growing enthusiasm for the concepts of community conservation.

4. *Growing importance of market forces*: during the 1990s there was an increasing emphasis on the role of the market. The role of the state was to create an enabling environment rather than to use fiscal instruments to mould an economy. Community conservation—particularly in the form of hunting, tourism, and other enterprises—fitted well with notions of entrepreneurship.

5. *Conservation biology*: improvements in the science of genetics revealed that spatially isolated protected areas would not ensure the long-term survival of many species. This implied that formal protected areas needed softer boundaries and links with other conservation lands. Community conservation approaches provided these opportunities, together with the opportunity to conserve habitat outside of the protected area networks.

Community conservation also built on early experiences of social forestry—particularly in India—where communities were encouraged to regenerate degraded forests for subsistence. The proximity and knowledge of communities living near forests also enabled them to ensure effective management, to monitor and police access, and to respond rapidly to threats such as wildfires. Their involvement thus made sound practical sense (Carter and Gronow, 2005).

4.1. Has community-based conservation worked?

The success or failure of community-based conservation is highly context specific and depends on many factors—social, cultural, ecological, market and institutional—at both community level and in the broader context. It also depends on the criteria against which success is measured and the particular moment in time at which it is measured. For example, the communal area conservancy system in Namibia has recently been held up as a model for success (WRI *et al.,* 2005). However, Namibia has some specific features which are unlikely to apply elsewhere—a large country with a very small population and hence very little pressure on land, very high value wildlife species (elephants, rhinos, etc.) and a national development strategy that is highly dependent on a flourishing nature tourism industry (Bond, 2007).

Blaikie (2006) queries the relevance of attempting to describe "conditions for success" of CBNRM, noting that "this has led to an ever-growing number of ever-growing lists". He also believes that trying to formalise CBNRM along the lines of an "idealised blueprint" fails to address specific contexts and specific community—and intra-community—characteristics: "for all the rhetorical intentions of CBNRM policies, the contradictions of engagement between the local and centralised institutions still tend to reproduce the community and its resources in a bureaucratically manageable form".

Although community conservation started off with a biodiversity focus, in response to donor agendas of poverty reduction, proponents were quick to adjust their rhetoric and articulate more strongly its value for rural development and democracy. Jones and Murphree (2004) suggest that:

"proponents of CBNRM have sometimes carelessly encouraged the notion of CBNRM poly-valency in rural communal contexts, sometimes in response to donor aspirations for comprehensive solutions to the problems of rural livelihoods and development. This has raised unrealistic expectations and resultant disillusionment, with particularly negative results when the notion has been propounded indiscriminately at local levels".

Hulme and Murphree (2001) point out that "re-inventing" conservation in Africa is not a quick job that can be easily accomplished, and short-term technical analyses to measure whether "conservation" and "development" have improved are likely to lead to negative conclusions and disenchantment. However, if a longer term perspective is taken then the evidence shows that community conservation has made a useful contribution by creating a knowledge base from which a more effective institutional framework for conservation can emerge. As they conclude, "we need to continue with this experiment" and promote learning networks to enable a more effective institutional framework for community conservation to evolve.

Box 8. Integrated conservation and development projects: token participation or something more?

In the 1980s, outreach programmes were established around many protected areas in recognition that the basic needs of local people need to be met if they are to support conservation efforts. Integrated conservation and development projects (ICDPs) were also established around protected areas to provide alternative livelihoods and reduce the impacts of local communities on biodiversity. These have helped to reduce the costs of conservation borne by local communities. There have been some successes and the approach has evolved in response to lessons learned, but the performance of ICDPs has mainly failed to meet expectations (Franks and Worah, 2003). ICDPs have been criticised for not addressing the critical link between development and conservation. They have often pursued these two goals in parallel rather than attempting to integrate them by finding synergies and trade-offs between the interests of different stakeholders. Many ICDPs have not addressed the dependence of communities on biodiversity and have been largely top-down, dominated by the interests of more powerful external actors to the disadvantage of local actors and the rural poor in particular (DFID, 2002; Pimbert, 2003a; Scherl et al., 2004; Franks and Worah, 2003; Chapin, 2004). ICDPs were designed and run by conservationists and not indigenous peoples. The conservationists had little experience of working with communities and many projects were ill-conceived. For example, they focused on agroforestry without finding markets, or on parks and management plans which did not interest local people (Chapin, 2004).

In addition, being based on the assumption that local people are the cause of resource degradation, ICDPs have often ignored external threats like market demand, policy failures, perverse incentives, demographic pressures and vested interests (eg. illegal logging) (Hughes and Flintan, 2001; Scherl et al., 2004). A study of ICDPs in Indonesia which looked at the threats to 21 protected areas found that "direct threats from local communities ranked well behind road construction, mining, logging concessions and sponsored immigration" (Wells et al., 1998). According to Hughes and Flintan (2001), "shortcomings in ICDPs caused by poor threat identification appear to be widespread" and relate to a number of factors, including pressures exerted by donor cycles resulting in "rushed" project design. The rapid pace of project design, driven by the desire of donors and implementing agencies to see rapid results, has further disempowered the rural poor (Franks and Worah, 2003). ICDPs, like many sustainable use initiatives, have also been hampered by a lack of attention to resource access, tenure and equity issues (Hughes and Flintan, 2001).

4.2. Institutional constraints to community-based conservation

Many countries have introduced new policies and laws to support community-based conservation. Governments throughout Southern Africa have made policy changes that appear to create the enabling conditions for CBNRM implementation—by devolving rights over the use of wildlife to local communities and enabling communities to retain benefits from using wildlife. In South Asia there have also been policy changes throughout the region towards more decentralised NRM models. Several countries have introduced participatory forest policies and laws in the last couple of decades which aim to devolve forest management and enhance benefits to communities.

Latin America is probably most advanced in terms of formal recognition of indigenous peoples' rights and co-management of protected areas (eg. in Ecuador, Peru and Bolivia).

Despite these policy reforms, the practice of community-based conservation remains problematic where it is dependent on centralised bureaucratic organisations for planning and implementation (Pimbert, 2003a). It is rare for conservation professionals to relinquish the control over key decisions that is required for fully-fledged community-based conservation to succeed. Only active participation in joint analysis, planning and action will lead to sustainable conservation (Pimbert and Pretty, 1995; Pimbert, 2003a).

Institutional cultures are difficult to change, particularly where control and vested interests are threatened (Carter and Gronow, 2005; Jeanrenaud, 2002). For example:

- In Zimbabwe, the intended devolution of authority to community level did not fully take place, but got stuck at intermediate levels of government such as district administrations (Mapedza and Bond, 2006).

- In Zambia, while CBNRM is well accepted, agencies often put their self-interest ahead of giving communities unambiguous rights and responsibilities, and seem deliberately to keep operational procedures unclear (Jones *et al*., 2006).

- In the Sahel (Niger, Mali and Burkina Faso) government departments are often reluctant to relinquish authority over resources (such as timber) that often provided a valuable source of income (Trench *et al*., 2007).

- Joint forest management agreements in India have rarely amounted to a true sharing of power, and in some cases have been little more than a new strategy for government to reassert control over forest land (Mayers and Bass, 1999; Griffiths, 2005).

Overall, many countries under-estimated "the degree of covert intransigence" they would face in moving from a natural resource governance system designed to serve colonial and national interests to one focused on community interests. However, Carter and Gronow (2005) note that younger staff are often more committed to the new approach than their senior, more conservative colleagues. This resistance may be rooted in a genuine belief in technical, "scientific" approaches and concern about allowing increased involvement of local politicians and community leaders. But it is increasingly evident that the quality of local people's forestry work can be better than that done by government agencies. Feigned government concern at the unreliability of local people "is now widely discredited as no more than an excuse to hold onto power – for instance the power to disburse budgets, occupy secure government positions and dispose of valuable forest products – and the opportunities for personal gain such power provides" (Carter and Gronow, 2005).

Concern about such resistance to devolution has led to an emphasis on collaborative management of natural resources, defined as "a partnership by which two or more relevant social actors collectively negotiate, agree upon, guarantee and implement a fair share of management functions, benefits and responsibilities for a particular territory, area or set of natural resources" (Borrini-Feyerabend *et al*., 2004a). In other words, it is about sharing power. Similarly, the term "collaborative forest management" focuses explicitly on a collaboration or partnership, which implies some equity in decision-making (Carter and Gronow, 2005). Others have distinguished between conservation that is community-*led* or community-*driven* as opposed to just community-based.

Other constraints often faced by community conservation initiatives include:

- Weak or unclear community rights to land, water, other natural resources and the benefits from their management.

- Imperfect processes for developing policies for community-based conservation or devolved resource control.

- Failure of policies to address the underlying causes of resource degradation, eg. trade terms, debt and debt servicing, lack of valuation of natural resources.

- Lack of community capacity for transforming natural capital/adding value (Trondheim/UN Conference on Ecosystems and People, 2007).

4.4. Strengthening local institutions, rights and participation

The MA and the CBD's ecosystem approach have stressed that biodiversity management should be decentralised to the lowest possible level. Strong and equitable community institutions, secure resource rights and active community participation are key governance attributes for effective community-based conservation. These are important to ensure that community conservation addresses the real and diverse livelihoods needs of communities, and provides sufficient benefits and incentives for communities to sustain them in the long term. As the MA found, success depends on meeting the economic and social needs of communities whose livelihoods depend on biodiversity; approaches that provide alternative livelihoods are rarely integrated into ongoing incentives for conservation.

Prioritising local institutions

The literature on common property resources highlights the importance and resilience of *local institutions* for biodiversity conservation, natural resource management and livelihoods (Pimbert, 2003a; Hesse and Trench, 2000). Evidence from multilateral projects evaluated 5-10 years after completion shows that where institutional development has been prioritised, the flow of benefits has risen or stayed constant. Conversely, if it is ignored in conservation policies, economic rates of return will decline markedly and conservation objectives may not be met (Pimbert, 2003a).

In the Sahel, the capacity of local communities to manage common property resources, such as village forests and water, has been eroded due to expropriation of many of these resources by the state. Government agencies established to take responsibility for these resources have largely failed. Since the 1990s there has been a drive to re-establish community-based systems of common property management. In these areas, villagers reported that they were less affected by the food crisis of 2005 (Trench *et al*., 2007). This experience shows that community resource management requires a significant investment in building local institutional capacity and confidence.

Local institutions should be democratic, transparent and accountable to the community, rather than to government agencies as is often the case in NRM decentralisation (Ribot, 2002). The most important functions for representative local institutions include:

- Equitable benefit-sharing: of revenues that communities receive (eg. from ecotourism).

- Sustainable resource management: developing and enforcing rules, penalties and incentives for resource conservation and rational use.

- Negotiation with outsiders: to claim and defend community resource rights and regulate/exclude outside access.

Many studies have highlighted the need for community conservation to build on traditional institutions (eg. Roe *et al*., 2000; Barrow and Mlenge, 2003; MA, 2005b; IUCN/CEESP, 2006). Traditional institutions include traditional authorities/elders, traditional resource management practices and tenure arrangements, and related customary laws and values (Swiderska *et al*., 2006). Some researchers have even shown that traditional institutions are more effective in achieving conservation outcomes than protected areas, for example in a marine context (Hutton *et al*., 2005). Strengthening culture and identity can be as important as the economic aspects of livelihoods (Reid, 2006), and serve to strengthen community cohesion and hence collective action and equity. Traditional institutions often centre on *collective* management of land and common property resources and social relations.

Maintaining this collective (ie. co-operative and inclusive) stewardship is important for effective common pool resource management and poverty reduction (IUCN/CEESP, 2006). Community conservation initiatives which focus on markets and integration with Western economies without paying attention to traditional institutions risk undermining cultural values that foster conservation and collective action.

However, some traditional institutions may reinforce existing inequities (e.g. in terms of land access and gender), particularly in less cohesive communities where local elites have started to use customary laws to secure their interests. Clearly, the aim should be to strengthen only those traditional institutions that promote equity and sustainability. In the Potato Park, a Community Conserved Area in Peru, for example, Andean principles of reciprocity, equilibrium and duality, which enshrine values of social equity and ecological conservation, are being strengthened and used to guide all natural resource management and economic activities (see Part 2, Section 9.2).

Strengthening resource access and tenure rights

As mentioned above, two other factors are also critical for effective community conservation: the recognition of *community rights* to natural resources; and *genuine participation* of local people in the analysis, design and implementation of initiatives. Legal frameworks should grant secure resource access and tenure rights to farmers, fishermen, pastoralists and forest dwellers. This is essential for the poor to take a long term view (Pimbert, 2003a). While close dependence on biodiversity brings a theoretically strong incentive to conserve it, weak access and tenure rights of many poor people mean there is a strong potential for over-exploitation (Roe and Elliot, 2006). Much research and experience has stressed that strengthening property rights is essential for effective biodiversity conservation (MA, 2005b; WRI *et al*., 2005). Where local communities have been granted secure use rights over neighbouring forests, for example, governments have witnessed clear reversals in forest degradation and biodiversity decline (Pimbert, 2003a).

Based on a global review of community forest management, Carter and Gronow (2005) found that the most significant gains to date probably lie in the South, "wherever local people have begun to enjoy real partnerships in forest management, based on recognised rights of use and access". Critically, in many countries, communities that enter into forest management partnerships do so in the knowledge that their rights of access to the resource, and the benefits that may accrue from the time invested in management, are secured by legislation (Carter and Gronow, 2005). For some, secure resource rights are more important than monetary income to reduce poverty and gain a decent livelihood (Farvar, 2006).[16].

It may be difficult to gain secure community resource rights, in which case building local institutions can provide a starting point to enhance local resource control and capacity to negotiate for recognition of rights. Local organisations set up by poor people, community groups, farmers' associations, etc., provide a vital means by which poor, marginalised groups can have greater influence on politics and decision-making locally and nationally (Bigg, 2006).

Building new partnerships with communities

Pimbert (2003a) pointed out that devolution of conservation to local communities does not mean that state agencies and other external institutions have no role. A central challenge will be to find ways of allocating limited government resources so as to obtain widespread replication of community initiatives. External agencies need to understand the dynamic complexities of local ecologies; promote wider access to biological information and funds; honour local intellectual property rights; and design technologies, policies, markets and other systems on the basis of local knowledge, needs and aspirations. This calls for new partnerships and forms of democratic deliberation between the state, rural people and the organisations representing them; and new institutional linkages and processes (eg. communication networks, participatory research). Community conservation is likely

16 Poverty is caused by social and political deprivations, such as a lack of rights and decision-making power, as well as a lack of income.

to be more cost-effective and sustainable when national regulatory frameworks become flexible enough to accommodate local peculiarities.

Moving from top-down conservation models to negotiated agreements with communities implies a willingness on the part of external agencies to support the priorities of communities and *vice versa*. As indigenous peoples have repeatedly stressed in various fora (including the CBD Working Group on Article 8(j)), the main priority for them is gaining secure rights to their territories, lands and waters. This is, however, a politically sensitive issue, which governments are often reluctant to address, and which the largest conservation NGOs have so far not been prepared to take a stand on (Chapin, 2004). Since many local communities value nature (for cultural reasons or because they depend on it), there should be sufficient common ground to build partnerships with external organisations (Vermeulen and Sheil, 2007). But some conservationists feel that such common ground, and hence the feasibility of partnerships, has been over-emphasised (Mavhunga 2007; Robinson, 2007).

Establishing partnerships also implies sharing decision-making power. Community forest management (CFM), for example, can be a mechanism to support sustainable livelihoods, reduce poverty and promote decentralised governance, but only if a concerted effort is made to address power relations (Carter and Gronow, 2005). Furthermore, while creating multiple partnerships in forest management is a major achievement, "a significant momentum of change needs to be generated to ensure that the previously marginalised can continue to participate equally and fairly alongside other stakeholders".

Thus, the social processes and policy reforms needed to promote effective community conservation are unlikely to come about simply through increased awareness by policymakers and professionals (Pimbert, 2003a). Recognition is also required of the significant power differences between local communities and other actors (eg. government, conservation agencies, park wardens/police, NGOs), and specific measures are needed to bridge them (Pimbert, 2003a; Vermeulen, 2006).

Communities can strengthen their negotiating power by establishing representative organisations (which represent a large number of people), gathering information about local resources which others may not have and getting access to funding. The federation of local organisations (eg. at regional level) has often proved effective for building marginalised groups' power and political influence (Macqueen and Mayers, 2006; Borrini-Feyerabend *et al.*, 2004a). In Nepal and Costa Rica, forest user groups are organised into networks, enabling them to gain greater political voice and influence with decision-makers. Community access to information and information exchange and technology are increasingly important tools in the empowerment of forest users (Carter and Gronow, 2005; see also Part 3, Conclusions and Ways Forward).

In addition, all actors need to be clearer about their goals in particular situations to help negotiate trade-offs; and the rationale for local participation and good governance in biodiversity decision-making needs to be made more explicit. The latter could lead to inclusion of "good governance" (eg. representation, accountability) in the assessment of project outcomes alongside conservation and more immediate economic benefits (Vermeulen, 2006).

The principles underpinning the concept of pluralism may be helpful for building equitable partnerships out of diverse interests and power bases. These are that (Carter and Gronow, 2005):

- Different views and objectives of different groups are legitimate, and no group has superior knowledge or control over decisions.

- There is no single absolute sustainable biodiversity management scenario, but many sustainable scenarios.

4.5. Scaling-up community conservation

As seen in the above discussion, there is a limit to what can be achieved by focusing only at the community level, since many of the barriers to effective community conservation stem from external policies and institutions. In

most cases, community-led conservation remains small-scale and isolated and is poorly integrated within the formal conservation sector (Roe and Bond, 2007). Scaling-up can be defined as providing "more quality benefits to more people over a wide geographical area more quickly, more equitably and more lastingly" (IIRR, 2000). It can be a geographical expansion to more people and communities within the same sector or stakeholder group, or an institutional expansion, involving expansion to other stakeholders and sectors (DFID-NRSP, 2002). Community conservation initiatives have often been supported by donor and NGO projects, protecting them from unfavourable external conditions, rather than being standard practice within government institutions.

Thus, the actions required to scale-up community initiatives can be summarised as follows:

- Institutional reforms, to promote government and NGO institutions that support genuine partnerships with communities.

- Policy and legal reforms across different sectors, to promote conditions that encourage sustainable use and conservation by communities.

- Participatory processes and community empowerment, to strengthen effective demand from below, and create spaces for dialogue between different actors.

- Documenting and spreading lessons, guidance and best practice[17] through networks of practitioners, resource users etc.

However, institutional reform is often particularly difficult as it is both politically sensitive and loaded with vested interests that are highly resistant to change. Carter and Gronow (2005) outline two broad approaches to scaling-up:

1. Starting at the local level, learning from experience and then scaling-up: this approach is sometimes used by NGOs and donor agencies, but does not address the institutional constraints and the need to secure a mandate to scale-up.

2. Starting at state level, and then tailoring the grand design to local needs: this approach is characterised by, for example, national governments and the World Bank. The challenge here is to incorporate enough flexibility to learn from experience and adapt to local needs.

A learning-by-doing approach to institutionalisation—where institutions learn while engaging in participatory processes to create new partnerships—may have a higher chance of success than attempts to train and re-orient staff (Carter and Gronow, 2005). The learning process could focus on three distinct goals: learning to be effective, where partnerships are developed; learning to be efficient, where this is done within realistic resource levels; and learning to expand, concerned with how to expand the approach across the region. "At each stage, capacity and, most critically, ownership, are created amongst the general public, local forest users, NGOs and forest agency staff". Ideally, this should be accompanied by publication to disseminate lessons by the various actors along the way (Carter and Gronow, 2005). This process will generate understanding of the institutional constraints (eg. time and facilitation needs, lack of funding). If donors have a good understanding of these issues, they can support the process through governance reform programmes.

In Tanzania's HASHI project (see Part 2) for soil and water conservation, the government was actively involved in the initial experiment and has now scaled-up to hundreds of villages in the area under the same project umbrella. The approach has also spread to neighbouring communities of its own accord, probably because it has focused on

17 Since community conservation is highly context specific, best practice examples may be of limited use without analysing the facilitating factors and constraints: social, economic, ecological, cultural, political and institutional. Sharing of best practice amongst local communities may be useful (Hooper et al., 2002), particularly where this focuses on community empowerment and institution-building, given the power imbalances discussed above. However, significant attention also needs to be paid to scaling-up government and NGO best practice on, for example, engaging in joint learning processes, negotiating equitable agreements, facilitating the emergence of strong local institutions, responding to local needs through flexible support etc.

re-vitalising traditional institutions (ngitili fodder reserves) and has brought clear livelihood benefits. The challenge now is to move from project-based support to local authority support and to other local authorities. The government of Tanzania has recently launched a national programme to scale-up participatory forest management (PFM), but there are many constraints to scaling-up in local government institutions (see Part 2, Chapter 8). Similarly, experience with scaling-up joint forest management (JFM) in government institutions in India shows the significant constraints to institutional change and the need to use multiple tools to operationalise the new approach (see Part 2, Chapter 7).

CHAPTER 5. GOVERNANCE AT THE NATIONAL LEVEL: MAINSTREAMING BIODIVERSITY

5.1. Mainstreaming biodiversity and economic valuation

As highlighted earlier, biodiversity is continually being degraded by mainstream development processes outside protected areas (where most biodiversity is located), including agriculture, tourism, extractive industries, and so on. Mainstreaming biodiversity in other economic sectors is critical to tackle the drivers of biodiversity loss: to reduce or modify the most damaging activities, and increase investment in those with no impact or positive impact which can help re-build biodiversity assets. Mainstreaming biodiversity is also vital to create more supportive conditions for the community-led conservation efforts necessary to meet both the CBD and MDG objectives at the local level (Roe and Bond, 2007).

Mainstreaming biodiversity is a central goal of the CBD's Strategic Plan for achieving the 2010 target (2002), and of the World Summit on Sustainable Development's Plan of Implementation (2002). The MA also concludes that "biodiversity will only be conserved and sustainably used when it becomes a mainstream concern of production sectors", and that more effort is required to integrate biodiversity into macro-economic and development planning frameworks (MA, 2005b).

To date, mainstreaming discourse has largely focused on biodiversity *per se* without considering the components of biodiversity that are most important for local livelihoods. Given that the rural poor are often heavily dependent on biodiversity, it is important to focus on reducing development impacts on both biodiversity *and* related livelihoods, particularly in Southern countries with high levels of poverty. Such a focus would also resonate more with development sectors and politicians and thus potentially be easier to promote in practice. Similarly, mainstreaming or integration attempts have sometimes focused on conservation through protected areas, which remain separate to development processes and can negatively affect the poor. For example, the indicators for the MDG 7 target on integrating sustainable development principles include the proportion of land area covered by forest, and the ratio of area protected to maintain biodiversity to surface area. Without attention to governance and equity issues within protected areas these area-based targets could undermine poverty reduction targets elsewhere (Roe, 2003).

Mainstreaming is likely to require a more fundamental shift in current development paradigms (eg. the focus on GDP growth), rather than tinkering at the edges. This is the only way to ensure rising consumption does not outstrip the Earth's systems on which human wellbeing and future development depends, and to promote local economies which are embedded in local ecologies.

There are a number of constraints to mainstreaming biodiversity which need to be addressed, not least of which is the economic constraint. As it is sometimes said, "what gets measured gets managed". The costs of conserving biodiversity are often quite clear in economic and financial terms, eg. the cost of maintaining protected areas; or loss of returns to cattle ranching if deforestation is controlled. However, the benefits are often difficult to express in such terms. This reflects the public good nature of biodiversity: if it is conserved, nobody can be excluded from enjoying the benefits and as a result nobody has an incentive to incur the costs of conserving it.

Many problems stem from the fact that biodiversity is economically "invisible": it is effectively "unowned", unpriced and/or unmarketed. This means that those responsible for biodiversity loss may not be directly affected by it or aware that they are affected. It also means that holding people to account for damage to biodiversity and seeking liability redress through the courts is very difficult. However, economic valuation of biodiversity is not straightforward, partly because biodiversity itself is very difficult to measure. Furthermore, economic and financial incentives need to be aligned with ecosystem stewardship.

Other barriers include (Irwin and Ranganathan, 2007):

- *Poor information flows*: Decision-makers lack or don't use information about biodiversity and ecosystem services and how their decisions and goals affect them or depend on their availability.

- *Lack of rights and participation of local people*: Local people lack secure rights to the land and resources they use; and while they depend directly on healthy ecosystems, they tend not to be part of decision-making processes.

- *Lack of co-ordination between sectors and levels*: management and use of ecosystems is fragmented among many different agencies which tend to work at cross-purposes and fail to co-ordinate across multiple levels.

- *Absent or weak accountability* mechanisms for government and business decisions about ecosystem services, leading to corruption.

Constraints to government mainstreaming

In circumstances like those described above, it is appropriate for governments to intervene to ensure a socially desirable level of biodiversity provision. They can do this not only by mainstreaming biodiversity and livelihoods in their own sectoral policies, plans and programmes, but also by establishing policies and incentives that encourage mainstreaming by others (eg. the private sector, foreign investors, NGOs, local communities, etc.). Improved coherence between different sectoral policies and investments should result in more efficient use of public funds (since different sectors do not undermine one another). Yet environmental protection is too often perceived as a constraint to development—environmental assets need to be recognised as producers of welfare for the poor and revenue for national economies (Assey *et al*., 2007). This is especially relevant to decision-making on foreign direct investment (FDI), which far surpasses development assistance. FDI poses a significant threat to biodiversity, especially in fast growing economies like India, not least because contracts are usually negotiated behind closed doors (Ayine *et al*., 2005).

However, the benefits of conserving biodiversity may be long-term while the costs are more immediate, raising issues about inter-generational equity. By enhancing climatic stability and ecosystem resilience, for example, the conservation of biodiversity can help to avoid or reduce the impacts of costly future environmental problems (eg. drought, flooding). But these benefits may not accrue to the current generation. Mainstreaming biodiversity in all development activities may thus be unrealistic—particularly in financially poor countries—and trade-offs will need to be negotiated (Swiderska, 2002a).

Governments are thus constrained by political considerations and the need to demonstrate benefits to the national economy of their actions in the short term. The rest of this chapter explores these constraints and ways to overcome them, focusing in particular on economic valuation and institutional co-ordination issues.

Economic valuation of biodiversity

Methodologies exist for valuing the different benefits associated with biodiversity based on the total economic valuation framework. The total economic value of an ecosystem is the sum of the direct use values, indirect use values, option values and non-use values (see Chapter 2). In practice, it is not possible to quantify all of these values in monetary terms in a robust way and valuation of direct use values is the most advanced. However, broadening the range of values considered in land use decisions is important to give at least a minimum estimate (EEP, 2003).

Local biodiversity values can be addressed by examining the value to local people of wild resources such as non-timber forest products that they harvest from forests and other natural ecosystems. While harvesting of wild resources is often for subsistence use, there is usually some marketing of these products or of similar products so that it is possible to identify an appropriate market price. The value of NTFPs is given by the price in the market (or of a similar product if not marketed) less the costs of collection, including time spent in travelling to the site.

Global biodiversity, which is usually associated with non-use values, is more challenging to value in monetary terms in a credible way because it requires estimating the existence values held by individuals who often have low understanding or awareness of the concept of biodiversity. In practice, valuation studies have used proxies such as the amounts paid in debt for nature swaps (Naidoo and Ricketts, 2006), but this is not helpful in situations where the aim of valuation is to justify public expenditure on biodiversity or to provide guidance on how much should be spent.

Valuation of indirect use values is also problematic. There is still limited understanding of how biodiversity contributes to the provision of ecosystem services (eg. MA, 2005a; Ash and Jenkins, 2007). For example, relationships between natural forest ecosystems and the provision of watershed services are very site-specific so extrapolation from one situation to another can be misleading (see Box 9). Data need to be gathered on a wide range of variables at each site over time and this can be costly. For option values, the challenges of estimating direct and indirect use values are compounded by the need to make predictions about future prices and preferences for biodiversity goods and services.

Nevertheless, it is possible to express all biodiversity values in economic terms—the methods and tools exist, but they need to be used much more widely, and refined through use. The CBD has recently published guidance on valuation tools (CBD Secretariat, 2007f). Biodiversity was on the agenda of the G8+5 meeting for the first time in 2007; and as a result a study—*The Economics of Ecosystems and Biodiversity* (along the lines of the *Stern Review on the Economics of Climate Change*)—is currently being compiled (TEEB, 2008).

Box 9. Biodiversity and watershed services

The relationships between forest cover and watershed protection are complex and site-specific as highlighted by FAO (2007) and Bruijnzeel (2004). Water flow may often increase as a result of removal of tree cover, but there is considerable variation between sites and between years because of differences in rainfall and degree of surface disturbance (Bruijnzeel, 2004). There is also some evidence that removal of forest cover leads to erosion in some circumstances, but much depends on local geology, topography and the management of the land during and after removal of forest cover (Bruijnzeel, 2004). Results of valuation studies vary considerably, with some finding that deforestation is associated with significant costs (eg., in the Leuser valley in Sumatra; van Beukering et al., 2003), while others find that there are net benefits. Aylward et al. (1999), in a study in Costa Rica, found that the costs for hydropower developments of increases in sedimentation are outweighed by the benefits of increased water yield. Extrapolating results from other sites can therefore be misleading.

Constraints and opportunities for donor mainstreaming

Donors also have an important role to play in mainstreaming biodiversity in development assistance to reduce their impacts and channel investment into rebuilding biodiversity assets. At the recent meeting on CBD implementation, Parties recommended that all bilateral and multilateral donor agencies should promote the integration of biodiversity into development co-operation (CBD, 2007b). Integrating biodiversity conservation into broader planning frameworks such as national development strategies or poverty reduction strategies (PRSPs)[18] was also recommended by the MA to ensure that resources for biodiversity are allocated in national budgets. As experience with poverty reduction strategy papers has been gained, it has become apparent that they will not be able to meet their goals without incorporating many of the CBD responsibilities. A recent analysis (Roe, 2007) shows that most recent versions of PRSPs do address biodiversity. By doing so, they will come close to the purpose of sustainable development strategies, which is to provide an overall framework for sustainable development objectives and integrate the various processes required to make the transition to sustainable development (Swiderska, 2002b).

18 PRSPs are prepared by governments in low-income countries through a participatory process involving domestic stakeholders and external development partners, including the IMF and the World Bank. A PRSP describes the macroeconomic, structural and social policies and programmes that a country will pursue over several years to promote broad-based growth and reduce poverty, as well as external financing needs and the associated sources of financing.

In recent years, as well as a shift to programme and direct budget support (DBS), there has been a decline in donor spending on environment, and a reduction in the use of environmental advisers in-country (ODI, 2006). With environment and biodiversity issues down the political agenda, it is all the more difficult for environment specialists to promote mainstreaming within their agencies. It seems that environment has lost out in the recent drive to reduce poverty, even though investing in environmental assets is critical for reducing and preventng poverty. At the same time, many donors continue to support economic policies and reforms (eg. structural adjustment) that undermine both social and environmental goals. Although climate change has gained significant ground in donors' priorities in recent years, other global environmental challenges—such as biodiversity loss—lag behind, despite the clear links between the two.[19]

With DBS it is largely up to partner countries to determine the extent to which environmental objectives are addressed in development assistance. The limited treatment of environment in most poverty reduction strategies shows a lack of enthusiasm for addressing environmental issues in many countries (ODI, 2006). However, donor agencies still have an influence over the policies and programmes of partner countries through high level dialogue. The problem is that environmental issues are not a political priority on *either side*, and hence do not usually enter the high level dialogue (which tends to focus on political and economic deals). But, as Tanzania's experience shows (see Part 2, Chapter 8), donors can play an important role in helping to mainstream environment—whilst ensuring leadership and ownership remains with the recipient government—by responding to national and local environmental agendas, strengthening local environmental capacity and supporting participatory planning processes which engage those whose livelihoods depend directly on environmental resources.

By channelling disbursements through finance and sectoral ministries, DBS also risks depriving less powerful environmental departments and civil society/local organisations of vital funding, thus widening the power imbalance between them, and weakening capacity for environmental mainstreaming. This makes it all the more important for donors to ensure that environmental issues, capacities and resources do not fall off the agenda and that they still fund environment departments and local organisations. The UNDP-UNEP Poverty-Environment Initiative has launched a set of country programmes to strengthen capacity for mainstreaming environment into development processes.[20] The "One UN" country progr ammes for improving co-ordination also provide an opportunity to integrate biodiversity issues into development programmes (CBD, 2007b).

Institutional constraints and opportunities

Experience to date has highlighted the following institutional constraints to mainstreaming biodiversity:

- *Weak environment/biodiversity departments*: most environment and biodiversity departments are politically weak policy units which are chronically under-resourced (ODI, 2007).

- *The sectoral structure of governments:* environment departments are separate from those responsible for finance, planning and development which control the bulk of investment. This is reinforced by educational systems which rarely encourage cross-sectoral thinking or approaches (Swiderska, 2002b).

- *Resistance to co-ordination:* where cross-sectoral committees have been set up to improve environmental integration, these have often not worked effectively because of turf battles between departments. Different departments tend to jealously guard their interests and avoid collaboration with their "competitors" as they are vying for scarce resources (Swiderska, 2002b).

- *Absence of high-level political support:* environment issues tend to be low on the political agenda. Without a high-level mandate for mainstreaming environment, it is difficult to get other sectors to take the issue seriously. There is often a lack of awareness of the role of environmental and biodiversity resources in sustaining national

19 Although Norad has identified biodiversity as its main environmental priority, above climate change, and Sida has established a dedicated technical support agency to address biodiversity and development issues (SwedBio).

20 see: http://www.unpei.org

economies and rural livelihoods, and of the revenues that can be generated by investing in them (Swiderska, 2002a; Assey *et al*., 2007).

- *Lack of attention to political processes:* focusing on mainstreaming as a technical issue alone is unlikely to succeed (Assey *et al*., 2007; Dalal-Clayton and Bass, 2002; Swiderska, 2002a). Past efforts to develop national biodiversity strategies and action plans (NBSAPs, see below) and mainstream biodiversity have largely been technical environment sector initiatives. There is growing recognition of the need to establish a participatory process, and get environment issues reflected in budgets (eg. see Carew-Reid, 2002), but the importance of political processes to get high-level buy-in has often been under-estimated.

- *Weak technical and analytical capacity and tools for addressing environmental opportunities and challenges (eg. Strategic Environmental Assessment)*: these remain at a relatively early stage of development and are given lower priority than traditional economic planning tools (eg. cost-benefit analysis) in making development decisions (ODI, 2007).

- *Lack of attention to poverty and development by the environment sector:* the environment is still largely seen as a marginal green concern rather than being central to peoples' lives and development. Environment specialists and convention processes still give limited attention to social and economic objectives, and sectoral ministries responsible for land, natural resources and development are rarely involved in international negotiations (Swiderska, 2002b; Roe and Bond, 2007). To engage development sectors, environment specialists need to focus on the linkages with poverty and development. As well as compiling data and case studies, this might involve, for example, supporting local environmental NGOs and CBOs and participatory processes to enhance the voice and influence of local people who depend on biodiversity and natural resources.

The CBD Working Group on Implementation identified the need to engage with existing planning processes to mainstream biodiversity in poverty reduction strategies, national strategies for the MDGs and national strategies for sustainable development (NSSDs); and to strengthen co-ordination between the different MEA implementation processes at national level (CBD Secretariat, 2007d). Given the large number of cross-sectoral priorities to be mainstreamed, identifying synergies between them can simplify this process (Swiderska, 2002b; Assey *et al*., 2007). Strategies for sustainable development (see below) can provide a framework for linking different environment and development planning processes. A cross-ministerial process could be established, which also involves civil society, to develop sustainable development priorities and criteria, so that these can then be used to screen sectoral policy and plans to integrate sustainable development priorities, including biodiversity (Swiderska, 2002b).

5.2. Improving the planning process for national biodiversity strategies and action plans

The CBD identifies national biodiversity strategies and action plans (NBSAPs) as the main mechanism for its implementation. The Strategic Plan for the Convention adopted at the Sixth Conference of the Parties recognises the importance of NBSAPs in achieving the 2010 target. CBD Parties have agreed that the ecosystem approach should be the primary framework of action under the Convention and should be fully taken into account in developing and reviewing national biodiversity strategies and action plans.

NBSAPs or equivalents have so far been completed by 147 Parties and 24 are preparing them; only 19 (10%) have not yet prepared them (CBD Secretariat, 2007e). NBSAPs have helped to raise awareness about biodiversity issues, improve understanding of the status and threats to biodiversity, identify actions to address them and secure funding for biodiversity projects. However, they have also faced a number of challenges and constraints, which are often associated with environmental planning processes.

The CBD recently reviewed implementation of the Strategic Plan and Obstacles to NBSAP implementation (CBD Secretariat, 2007b; CBD Secretariat, 2007e). While noting a lack of data to reliably assess progress, these reports, along with earlier reviews of NBSAPs, highlight a number of constraints and ways forward, discussed below.

Limited stakeholder participation and lack of high level support

NBSAPs have often lacked a suitable process: both the participatory process to engage stakeholders and raise public awareness, and the political process to get high-level government support. Without this, many NBSAPs have remained paper documents on shelves, developed by a few experts or consultants, rather than being actively debated and implemented by government and civil society (Swiderska, 2002a; Dalal-Clayton and Bass, 2002; Carew-Reid, 2002). Although consultations have been part of NBSAP preparation, the range of stakeholders involved is often not adequate to ensure ownership of the NBSAP and mainstreaming beyond the environmental community (CBD Secretariat, 2007e). Furthermore, effective communications programmes are lacking for many NBSAPs (CBD Secretariat, 2007e). In addition, the focus on national level planning has not promoted sufficient involvement by local actors. Nevertheless, a few countries have or are developing sub-national strategies at state or local level (CBD Secretariat, 2007e).

Amongst the priorities for addressing constraints to NBSAP implementation, the CBD Working Group on Implementation emphasised the need to:

1. Secure high-level government support for developing, implementing and reviewing NBSAPs; and engage all stakeholders and sectors in the process, including local communities and the private sector.

2. Promote local action for conservation and sustainable use by integrating biodiversity into sub-national and local planning processes and developing strategies and action plans at these levels (CBD Secretariat, 2007d).

An externally-driven plan rather than a locally-owned process

NBSAPs have often been developed in response to the CBD and funding from the UNDP/GEF (see Box 10), without being a real national priority for governments. Consequently, the process has ceased once funding has ended. As the recent CBD review found, the action plans frequently list projects for external funding; few specify domestic sources of funding or address fundamental issues of policy and institutional change (CBD Secretariat, 2007e). Like many environmental planning processes, they have been promoted as time-bound projects—rather than ongoing policy mechanisms—and have been promoted mainly by donors who have provided financial and technical support (Dalal-Clayton and Bass, 2002).

It appears that few NBSAPs have led to significant changes in national policies and laws for conservation, natural resources or development (although a third of NBSAPs were only adopted in the last two years). As with many environmental planning processes, part of the problem has been a lack of prioritisation—NBSAPs have often been overly ambitious wish-lists which are well beyond the capacity of implementing agencies (Dalal-Clayton and Bass, 2002). Environmental planning processes need an agreed approach to set priorities based on equity, efficiency and sustainability, for example, as well as timeliness, practicality, public "visibility" and multiplier effects (Mayers and Bass, 1999). NBSAPs have also focused on developing a document as the main output, as opposed to establishing systems and processes to engage actors, enable debate, mobilise action and review progress on an ongoing basis (Swiderska, 2002b). Guidance for developing NBSAPs emphasises the need for cyclical processes, where NBSAPs are regularly reviewed in light of experience with implementation to improve their effectiveness (CBD Secretariat, 2007a).

The need to build on existing instruments and processes

The more successful NBSAPs in terms of being implemented and mainstreamed are those which include a range of instruments (eg. Brazil, Sweden and Norway). This is because they fit into existing domestic procedures (CBD Secretariat, 2007e).

Experience with other environmental planning processes (National Strategies for Sustainable Development, National Conservation Strategies, National Environmental Action Plans, etc.) has also shown that a collection of measures and processes that build on what exists are far more effective than separate "master plans". OECD guidance, for

example, defines sustainable development strategies as: "A co-ordinated set of participatory and continuously improving processes of analysis, debate, capacity-strengthening, planning and investment, which integrate the economic, social and environmental objectives of society, seeking trade-offs where this is not possible" (Dalal-Clayton and Bass, 2002).

Lack of attention to the ecosystem approach and local biodiversity values

The ecosystem approach emphasises multiple needs, decentralisation, community rights and cross-sectoral integration, but reference to it is absent from most NBSAPs, partly due to a lack of understanding of how to apply the approach in practice. Furthermore, there are so many other recommendations and outputs from the CBD that the "good ones" get lost in the sea of paperwork. There is a need to simplify the ecosystem approach for key target audiences, and market it as a tool for improving economic benefits (CBD Secretariat, 2007c).

NBSAPs have also tended to favour global biodiversity objectives (eg. protected areas, threatened species, biodiversity hotspots) over local biodiversity values (eg. conserving biodiversity for subsistence, cultural reasons, use in times of hardship etc.) (Swiderska, 2002a). For example, agro-biodiversity hotspots, which are of both global and local value, have generally been neglected in Asian NBSAPs (Carew-Reid, 2002). Guidance for NBSAPs tends to emphasise scientific assessment approaches and use of biodiversity hotspots and bio-geographical regions. Nevertheless, setting priorities by bio-geographic region enables a more holistic approach, as management strategies can be tailored to the biophysical and socio-economic conditions of each region (Carew-Reid, 2002). Similarly, ecosystem-based approaches for integrated land and resource management (such as the CBD ecosystem approach and the MEA framework) can be used to formulate development plans based on social, economic and ecological factors.

NBSAPs have tended to deal inadequately with the reality that people have always used biodiversity to sustain themselves. While they flag issues of unsustainable use, they tend not to include analysis of patterns of use (by communities, multi-national companies, governments etc.) and of the potential of different actors to contribute to conservation and sustainable use. Nor do they assess practical applications of indigenous know-how in developing more sustainable resource management and production systems (Swiderska, 2002a).

The recent CBD review of obstacles to implementing NBSAPs identified a number of external challenges and opportunities that need to be taken into account in the identification of priority actions. These include the eradication of hunger and the MDGs, which remain a major challenge and priority issue for many developing countries. NBSAPs need to demonstrate more clearly their contribution to poverty reduction and develop tools to deal with biodiversity-development trade-offs. Furthermore, poor people who are particularly dependent on biodiversity and ecosystem services tend to be marginalised from existing political structures and excluded from involvement in setting policies. Reaching these people, for example by engaging with indigenous and local communities, is therefore necessary to address both conservation and poverty reduction goals (CBD Secretariat, 2007b).

CHAPTER 6. GOVERNANCE AT THE INTERNATIONAL LEVEL

The "ineffectiveness of the international governance of biodiversity" has been identified as one of the most significant obstacles to achieving the 2010 target (Chatham House and Countdown 2010, 2006). These weaknesses include its fragmented nature, lack of strength, and the weak political clout of biodiversity conservation compared to other issues such as trade and development, which are often in conflict with biodiversity goals. For example, biodiversity issues have barely been recognised in the international negotiations on agriculture, and the CBD has not yet been granted observer status within the WTO (Chatham House and Countdown 2010, 2006).

With the Millennium Development Goals and poverty reduction high on the political agenda, poverty and governance increasingly feature in biodiversity discourse. But many in the conservation community still see livelihoods issues as secondary, if not detracting from or conflicting with conservation goals (Chapin, 2004). Similarly, mainstream discourse on access and benefit-sharing (ABS) centres largely around mechanisms for benefit-sharing with governments and national institutions, with community livelihoods and rights often secondary. How to compensate communities for the costs they suffer from conservation is only now being seriously discussed; while ABS debates are still far from acknowledging the customary rights of communities over genetic resources such as landraces.[21] Thus, the dominant governance paradigm—for both conservation and ABS—remains one of "government decision-making and benefit-sharing" (where local communities are largely passive recipients), as opposed to one of "shared decision-making and rights". This chapter discusses these issues in turn.

6.1. The Convention on Biological Diversity

The UNCED Convention on Biological Diversity (CBD), which came into force in December 1993, has been ratified by 190 countries (Parties) and is the most comprehensive international agreement on biodiversity.[22] This section focuses mainly on the CBD policy and related governance issues, but also looks at the FAO treaty on plant genetic resources, and indigenous and human rights instruments. We particularly focus on genetic resources since we have already discussed other conservation governance themes in previous chapters.

The CBD provides a critical framework for international co-operation to address biodiversity issues and develop responses at global and regional levels. Its three objectives are:

1. *The conservation of biodiversity.* Parties are required to identify important components of biodiversity. They must also develop "national strategies, plans or programmes for the conservation and sustainable use of biodiversity" (NBSAPs, see Chapter 5) and integrate biodiversity conservation and sustainable use into relevant sectoral or cross-sectoral plans, programmes and policies (Article 6). The CBD emphasises the need for *in situ* conservation (Article 8) through a range of measures, including the establishment of a system of protected areas or areas "where special measures need to be taken to conserve biodiversity", rehabilitation of degraded ecosystems, and recovery and legal protection of threatened species (Glowka *et al*., 1994).

2. *The sustainable use of its components.* The sustainable use of biodiversity is mainly addressed in Article 10. Parties must identify priorities which need special conservation measures or offer greatest potential for sustainable use, as well as activities which may adversely affect conservation and sustainable use (Glowka *et al*., 1994). The CBD also recognises the special role of indigenous and local communities, requiring Parties to "respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities

21 "Landrace" refers to domesticated animals or plants adapted to the natural and cultural environment in which they live (or originated).

22 Other international agreements on biodiversity include: the Convention on Trade in Endangered Species (CITES), the Ramsar Convention on Wetlands, the Convention on Migratory Species, the World Heritage Convention, and the FAO Treaty on Plant Genetic Resources for Food and Agriculture. Also of relevance for biodiversity are the Convention to Combat Desertification, the Framework Convention on Climate Change and the Intergovernmental Forum on Forests. In addition, a number of agreements on indigenous peoples' rights and human rights address natural and biological resources.

embodying traditional lifestyles relevant for biodiversity conservation and sustainable use" (Article 8(j)). Article 10(c) also recognises the need to protect customary use.

3. *The fair and equitable sharing of the benefits arising from the use of genetic resources.* At the heart of the CBD is a deal whereby Southern countries agree to conserve biodiversity, provided that industrialised countries agree to share the benefits they derive from the commercial use of genetic resources. This objective requires technology-rich countries to share the benefits fairly and equitably with biodiversity-rich developing countries that provide access to those resources. This was also intended to support the other two CBD objectives, by helping to generate funds for conservation. Parties are required to take legislative, administrative or policy measures to share the results of research and development and the benefits arising from the use of genetic resources with the contracting party providing the resources (Article 15[7]). Access is to be subject to the prior informed consent (PIC) of the country providing the resources and on mutually agreed terms.

Improving CBD implementation

The CBD process (COP meetings, etc.) has played an important role in improving understanding of biodiversity challenges, and has generated many useful guidelines, principles and ideas to help tackle them. It has provided a key forum for international co-operation on biodiversity issues and for promoting action at national level. Many countries have established national CBD focal points or policy units, and developed national biodiversity strategies and action plans (NBSAPs) to implement the CBD (see Chapter 5). New policies and laws have been introduced to address biodiversity issues (eg. on access to genetic resources and benefit-sharing) and new projects launched.

However, despite these achievements, in 2005 the MA found that ecosystems are being degraded faster than ever before, which suggests that the objectives of the CBD are not being met. Indicators of progress towards the 2010 Biodiversity Target show that the area covered by protected areas has increased (although marine protected areas remain under-represented), but this is the only indicator to show positive progress (CBD Secretariat, 2006). A Chatham House workshop on "Responding to the 2010 Biodiversity Challenge" (Chatham House and Countdown 2010, 2006) noted the gaps in implementation of the various CBD strategies and action plans, and that while there have been "decisions galore", many have not been put into action.

Mainstreaming biodiversity beyond protected areas

Investments in biodiversity have focused mainly on protected areas and conservation, while other priorities such as sustainable use and mainstreaming biodiversity in economic sectors have been less well addressed. The CBD Working Group on Review of Implementation in July 2007 found "inadequate mainstreaming of biodiversity" in sectoral planning, national development and poverty reduction strategies (CBD Secretariat, 2007d). While protected areas are a critical tool for conservation, the lack of integration of biodiversity concerns with natural resource use, transport, energy, development planning, investment and so on, means that the CBD objectives continue to be undermined by development processes, since most biodiversity occurs outside protected areas. In South Africa, for example, biodiversity levels declined in the decade after Rio, despite considerable expansion of protected areas (Wynberg, 2002).

As the CBD Strategic Plan (Box 10) noted in 2002:

> *"the need to mainstream the conservation and sustainable use of biological resources across all sectors of the national economy, society and policymaking framework is a complex challenge at the heart of the Convention. This will mean cooperation with many different actors… Integrated management of natural resources, based on the ecosystem approach, is the most effective way to promote this aim of the Convention".*

Box 10. The strategic plan for CBD implementation

The Strategic Plan of the CBD sets out four key goals:

1) CBD leadership in international biodiversity issues and integration of biodiversity into sectoral plans, programmes and policies at global and regional level.

2) Improved capacity to implement the CBD.

3) NBSAPs and integration of biodiversity into relevant sectors to serve as frameworks to implement the CBD.

4) Improved understanding of the importance of the CBD and broader society engagement in implementation.

NBSAPs have provided a framework for conservation activities, but not for mainstreaming biodiversity and other CBD priorities (CBD Secretariat, 2007b), and have generally not affected the main forces driving biodiversity loss (CBD Secretariat, 2007e; see also Chapter 5). Reference to the ecosystem approach is absent from most NBSAPs (CBD Secretariat, 2007e).

Some of the most exciting developments have been outside the formal government sector, where NGOs and CBOs have used the CBD objectives to shape their activities at local level. This has often led to on the ground implementation of a more integrated approach (Swiderska, 2002b). For example, people's biodiversity registers, community gene banks, medicinal gardens and community conserved areas have served to address all three objectives of the CBD, as well as rural livelihoods, through decentralised biodiversity management.

Raising biodiversity's political profile

Although the CBD is a legally binding agreement and ratification signifies a commitment to implementation in national law, it lacks "teeth" and the extent of implementation depends on the will of the Parties. Country progress is reviewed through periodic national reports. By contrast, compliance with economic and trade agreements, such as those of the WTO, can be enforced through the dispute settlement and sanctions mechanism.

A key obstacle to CBD implementation is the low political priority given to biodiversity issues, particularly in many developing countries, where biodiversity remains a special interest issue which has failed to reach the mainstream (Chatham House and Countdown 2010, 2006). Thus, there is a need to raise awareness of the importance of biodiversity for meeting poverty reduction and development goals. Far from being a national priority, commitment to the CBD has often been limited to weak biodiversity policy units within environment departments which are often very under-funded (Swiderska, 2002a; Swiderska, 2002b).

The relatively weak political status of the CBD and national biodiversity units makes it difficult to influence more powerful institutions like the WTO and national departments for finance, agriculture and natural resources, in order to reduce their impact on biodiversity. Economic and trade departments consider international agreements on environment, social and human rights issues as secondary to those on trade and economic co-operation (Swiderska, 2002b). At the same time, some biodiversity units do not see mainstreaming biodiversity as their role (eg. in India); while many see the CBD and NBSAPs largely as a means to access international finance for conservation (CBD Secretariat, 2007e).

Addressing lack of resources and incentive measures

Parties to the CBD have reported that the lack of financial, human and technical resources and incentive measures are the most widespread constraints to implementation of the Convention (CBD Secretariat 2007d). Available resources and capacity for implementation in Southern countries have been put under strain by the proliferation of international environmental agreements and meetings. A lot of time is spent negotiating detailed text such as COP Decisions which are not widely referred to or implemented. Perhaps the same or better results could be achieved with fewer international negotiations and a stronger focus on practical

implementation and learning (Swiderska, 2002b). In general, there has been sufficient elaboration of the CBD at international level, and much more work is now needed to make the CBD work at national and local levels (Swiderska, 2002b).

The CBD process and stakeholder influence

As with many inter-governmental processes, there is a marked imbalance in the negotiating capacity of rich and poor countries and Northern agendas tend to dominate. The negotiating capacity of countries—in terms of size of delegations, negotiating skills, information etc.—typically reflects their economic status. Delegations can range from 40 people to just 2, and when a number of sub-groups are meeting in parallel it can be difficult for the priorities of Southern countries to be properly articulated. Furthermore, Southern countries have at times been subjected to coercive tactics from more powerful delegations. Thus, although in theory the UN structures promote equity, in practice the least developed countries are often at a significant disadvantage (Swiderska, 2002b). However, the growing economic and geopolitical power of the "BRICS" countries—Brazil, Russian, India, China and South Africa —provides a new opportunity for Southern agendas to have greater influence, especially where common negotiating positions can be found.

National delegations are largely composed of experts from environment departments, while development perspectives are often poorly represented. From time to time, Parties raise concerns about indigenous and local communities, or include them in delegations, but such interests remain fairly marginal (and commitment to them is often even less evident in the national context). Thus, despite the CBD's commitment to multiple needs and decentralisation under the ecosystem approach, local managers of natural resources who depend directly on biodiversity for their livelihoods—farmers, herders, fishermen etc.—are not well represented in international decision-making on biodiversity (see Box 11). Nor are the CBD fora accountable to local biodiversity managers in any way. In recent years, indigenous peoples have become more active in CBD meetings, particularly through the International Indigenous Forum on Biodiversity (IIFB), but their participation in decision-making remains marginal.

Box 11. The Global Environment Facility

The Global Environment Facility (GEF) is the formal financing mechanism for the CBD in developing countries, set up to cover the incremental costs of biodiversity conservation. It is guided by the decisions of the COP and administered by UNEP, UNDP and the World Bank, and has largely focused on supporting protected areas, and national biodiversity strategies. Although technically the GEF only funds governments, large international conservation NGOs have also benefited from GEF funding (Chapin, 2004). A recent GEF evaluation found that the links between local and global benefits were often overlooked, misunderstood or inappropriately addressed (GEF Evaluation Office, 2006).

The GEF has a number of advisory bodies, most notably the Scientific and Technical Advisory Panel (STAP) and Technical Advisory Groups, which develop strategies for each focal area. These bodies comprise scientific experts, and involvement of the private sector is anticipated for a proposed GEF private sector initiative. There is no evidence however, of any involvement of local biodiversity managers—such as forest dwellers, fishermen, peasant farmers—in the GEF advisory bodies. The exception is the UNDP Small Grants Program which provides funding to local NGOs, and includes NGOs in its national advisory bodies. However, this represents only a small fraction of the GEF's total expenditure to date of US$6 billion.

The position of Northern countries seems to be increasingly influenced by business and biotechnology lobbies keen to ensure that ABS requirements do not go beyond the broad goals of the CBD to become legally binding. Northern countries sometimes include trade departments in their delegations to negotiate ABS and biotechnology issues, thus bringing private sector interests into the CBD's global public good agenda. Yet these interests often conflict with the objectives of the CBD and the interests of Southern countries and local communities.

Information inputs into CBD policymaking largely come from scientific disciplines. The CBD's main advisory body is SBSTTA (the Subsidiary Body on Scientific, Technical and Technological Advice), which provides scientific and technical assessments on the status of biodiversity and the types of measures being taken to implement the CBD, and responds to questions from the COP. There does not appear to be any mechanism by which local or participatory biodiversity assessments are considered in the CBD process, outside the working group on Article 8(j).

Civil society organisations can attend CBD meetings as Observers and make statements, but only at the end of the discussion on each agenda item and after the floor has been given to UN and inter-governmental organisations. Thus, the extent to which they can participate in framing the debate is limited, and there is no obligation for Parties to take their views into account. Furthermore, well-resourced and connected conservation NGOs have a bigger presence and lobbying capacity, and hence more influence than people-centred organisations (eg. Southern NGOs and CBOs) and those representing local biodiversity managers (indigenous organisations, pastoralists etc). Although their livelihoods, history and identity may be closely tied up with biodiversity rich areas, they have little influence over international biodiversity policy and finance.

Because of the financial resources they are able to command, international conservation organisations are an important stakeholder group for the CBD and well-placed to shape and influence its agenda—despite their unofficial status. A recent example of this was in the deliberations over the Programme of Work on Protected Areas. A number of the biggest international conservation organisations submitted a "Joint NGO Statement and Joint NGO Pledge"[23] in which they outlined their suggestions for the appropriate content of the PoW and noted their combined spending of $1billion per annum in over 100 countries, which could be used to support the implementation of the PoW.

Indigenous representatives can participate almost equally as governments in the CBD Working Group on Article 8(j), which has an informal indigenous co-chair—or "friend of the chair". This has been an important forum for indigenous peoples to express their views, and has developed useful guidelines and standards (eg. the Akwe Kon guidelines on sacred sites and indigenous lands and waters). However, the 8(j) Working Group has little influence over the broader CBD agenda, and has been weakened by low attendance by Parties. The Working Group on ABS, which emphasises state sovereignty over natural resources (as opposed to customary rights), is a far higher priority for governments. Furthermore, Article 10(c) which aims to promote customary use of biodiversity based on cultural practices, has so far received little attention from CBD Parties.

The CBD is also increasingly engaging with big corporations, for example through meetings at the high-level ministerial segment of the COPs. This may bring new opportunities for financing and for integrating biodiversity concerns into business and industry activities. However, it is also feared that rather than addressing the CBD agenda, companies are trying to shape it in their favour, particularly where there are conflicts of interest (eg. around ABS, intellectual property rights, mining etc).

6.2. Gaps in the biodiversity discourse: sustainable use and human rights

Sustainable use

International biodiversity discourse has to a large extent focused on the CBD's first and third objectives: conservation (protected areas, threatened species etc.) and access to genetic resources and benefit-sharing (ABS) and related issues (traditional knowledge, intellectual property rights, biosafety). These two strands still have only limited interaction between them at international level, and come with different, as well as similar, sets of governance issues. Less attention has been paid to the CBD's *sustainable use* objective, which in a sense bridges the other two, linking conservation and development.

23 Joint NGO Statement and Joint NGO Pledge to support implementation of a strong Programme of Work on Protected Areas under the Biodiversity Convention. Submitted to SBSTTA 9 (Nov 2003) by BirdLife International, Conservation International, Greenpeace, The Nature Conservancy, Wildlife Conservation Society and World Resources Institute.

The ecosystem approach, adopted by the Parties in 2000 as the main framework for implementing the CBD, aims to promote all three objectives of the CBD through integrated land and NR management (see Section 3.3). However, it has remained at the margins of biodiversity discourse and there is relatively little or no funding to help translate the principles of the ecosystem approach into practice (Pimbert, 2003). In the recent CBD review of implementation of the ecosystem approach, only 12% of Parties indicated that the principles and guidance were being substantially applied (CBD Secretariat, 2007c).

However, the Millennium Ecosystem Assessment highlighted the importance of the CBD's ecosystem approach and placed human wellbeing and ecosystem services at the centre of the analysis. It provides an opportunity for renewing attention on the approach, as well as providing guidance to assist its practical implementation. This and other recent reports (eg. WRI *et al.*, 2005) could renew the focus on the CBD's sustainable use objective, and offer a new entry point for analysis of biodiversity issues, including governance. A focus on sustainable use could break the current stalemate surrounding the ABS and conservation agendas which are somewhat stuck along North-South and protectionist *versus* pro-poor lines. However, implementing the MA's recommendations—eg. tackling perverse incentives like agricultural subsidies—will be just as difficult politically.

Agricultural biodiversity

Biodiversity discourse has focused largely on conserving wild resources and paid less attention to sustaining agricultural biodiversity, which supports the livelihoods and food security of many poor communities. Traditional farming systems sustain important agricultural and wild biodiversity, but receive little official recognition and support. Under the FAO Treaty on Plant Genetic Resources for Food and Agriculture, much of the effort focuses on *ex situ* conservation (in gene banks, botanic gardens etc.). While important for global conservation and food security, *ex situ* conservation severs links with local livelihoods and the resources cease to be part of local innovation processes which create further diversity.

The objectives of the FAO Treaty on Plant Genetic Resources for Food and Agriculture mirror those of the CBD. The treaty, which has 103 Parties from both Southern and industrialised countries, establishes a multilateral system to facilitate ABS through material transfer agreements. For the first time, it recognises farmers' rights in a legally binding agreement. It requires governments to take measures to protect traditional knowledge on plant genetic resources; to promote farmers' rights to share equitably in the benefits from the use of genetic resources; and to promote farmers' rights to participate in national level decision-making on genetic resources (see Box 12). However, the treaty only covers a limited number of genetic resources included in the annex (35 crop genera and 29 forage species), which are mainly commercial as opposed to traditional (ie. farmers') varieties. Futhermore, it does not elaborate practical mechanisms for protecting farmers' rights, or require the free prior informed consent of farmers for access to or use of their varieties (IIED *et al*., 2006).

Human rights

A number of international agreements on indigenous and human rights recognise the rights of communities to their territories and natural resources, and to make decisions about the biological resources on their territories. These articulate the needs of local communities who depend on biodiversity and hence focus on resource conservation and management for local use. They provide important principles for a "rights based approach" to biodiversity governance founded on equity and social justice. Hence they need to be considered alongside the CBD, FAO and other biodiversity related agreements, which largely address the rights of governments, but not communities. They include (and see Box 12):

- The UN Declaration on the Rights of Indigenous Peoples, which was recently adopted by the General Assembly, and is the culmination of a long process of deliberation amongst indigenous peoples.
- The International Labour Organisation Convention 169 on Indigenous and Tribal Peoples.
- UN Guidelines on the Protection of Indigenous Cultural Heritage (UN Human Rights Commission).

- The international covenants on Economic, Social and Cultural Rights, and on Civil and Political Rights, which recognise the right of all people to freely dispose of their natural resources.

However, despite having broad-based support from indigenous peoples, whose territories contain much of the world's biodiversity (Pimbert, 2003a; Chapin, 2004), such agreements have been largely absent from mainstream biodiversity discourse. Some are non-binding (eg. the UN Declaration on Indigenous Rights) and those which are legally binding (eg. ILO Convention 169) have not been widely ratified and enforced. Nevertheless recent approval of the UN declaration by 143 governments (with only four countries against[24] and 11 abstentions) represents an important international commitment to respecting the rights of indigenous people.

The biodiversity and human rights agendas need to be brought together to make the governance of biodiversity more equitable, inclusive and livelihoods focused. As discussed earlier, this can also improve conservation outcomes. Some CBD Parties are also Parties to ILO 169 and many voted in support of the UN declaration. Yet, within the CBD, a number of conflicts between the two agendas remain unresolved. For example, the UN declaration recognises the rights of indigenous peoples over their traditional territories and resources, while the CBD recognises state sovereignty over natural resources.

Box 12. Agreements on indigenous peoples' rights and human rights

ILO Convention 169 on indigenous and tribal peoples

The International Labour Organisation Convention 169 Concerning Indigenous and Tribal Peoples in Independent Countries entered into force in 1991, and has been ratified by 17 countries.[25] It calls on governments to develop systematic action to protect the rights of indigenous and tribal peoples, with the participation of the people concerned (Article 2.1). Such action includes measures for "promoting the full realisation of the social, economic and cultural rights of these peoples with respect for their social and cultural identity, their customs and traditions and their institutions" (Article 2.2 [b]).

Article 7 provides that: "the people concerned shall have the right to decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual wellbeing". Article 8 requires that: "in applying national laws and regulations to the peoples concerned, due regard shall be had to their customs or customary laws". The convention also requires its application to recognise and protect "the social, cultural, religious and spiritual values and practices of these people".

ILO 169 also recognises the need to respect the special importance for the cultures and spiritual values of the peoples concerned of their relationship with the lands and territories, which they occupy or otherwise use, and in particular the collective aspects of this relationship. It recognises the rights of ownership and possession by the peoples concerned over lands which they traditionally occupy. The rights to the natural resources pertaining to their lands shall be specially self-guarded, including the right to participate in the use, management and conservation of these resources.

The convention applies to tribal and indigenous peoples.[26] In addition, "self-identification" as indigenous or tribal is regarded as a fundamental criterion for determining the groups to which the convention applies.

24 The US, Canada, Australia and New Zealand.

25 Norway,Mexico, Colombia, Bolivia, Costa Rica, Paraguay, Peru, Honduras, Denmark, Guatemala, the Netherlands, Ecuador, Fiji, Brazil, Venezuela and Argentina.

26 Defined as: a) Tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations. b) Peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

UN Declaration on the Rights of Indigenous Peoples

This declaration was adopted in September 2007 and is considered the most complete and representative statement of principles and demands for indigenous rights because of its broad and long consultation process with indigenous leaders. It stresses indigenous peoples' rights to (*inter alia*):

- Self-determination, representation and full participation.
- Full ownership, control and protection of their cultural and intellectual property, including special measures to control, develop and protect sciences, technologies and cultural manifestations, human and other genetic resources, seeds, medicines, and knowledge of the properties of flora and fauna.
- Own, develop, control and use the lands and territories, including flora and fauna and other resources which they have traditionally owned or otherwise occupied or used.
- Full recognition of their laws, traditions and customs, land-tenure systems and decision-making institutions for the development and management of resources.
- Conservation, restoration and protection of the total environment and productive capacity of their lands, territories and resources.
- Free and informed consent (ie. PIC).
- Just and fair compensation for any activities that have adverse environmental, economic, social, cultural or spiritual impact.
- Collective as well as individual human rights.
- Restitution of traditional lands, territories and resources, and cultural, intellectual, religious and spiritual property, taken without their free and informed consent, or in violation of their laws, traditions and customs.

Universal Declaration of Human Rights: Acknowledges the right to collective as well as individual ownership of property; the right to manifest religion or belief in teaching, practice, worship or observance; and the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author. However, existing human rights legislation is mainly directed at individual rights.

International Covenant on Economic, Social and Cultural Rights (ICESCR), and the ***International Covenant on Civil and Political Rights (ICCPR)****:* All peoples have the right to self-determination; and all peoples may, for their own-ends, freely dispose of their natural wealth and resources, without any obligations arising out of international economic co-operation. In no case may a people be deprived of its own means of subsistence.

FAO Treaty on PGRFA and Farmers' Rights: Article 9 sets out the following measures that governments should take to protect and promote farmers' rights:

(a) protection of traditional knowledge relevant to plant genetic resources for food and agriculture;

(b) the right to equitably participate in sharing benefits arising from the utilisation of plant genetic resources for food and agriculture;

(c) the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture".

6.3. Access to and benefits from genetic resources

A key governance issue—whether we are talking about conservation, sustainable use or ABS—is the rights of indigenous people and communities who are the local custodians of biodiversity. Of particular concern is their right to participate in decision-making, to access the biological resources on which they depend, and to receive an equitable share of the benefits and costs of using and protecting these resources. The CBD's Articles 8(j) and 10(c) recognise the special role of indigenous and local communities in conservation and sustainable use, as does the Preamble. Article 8(j) requires parties to respect and maintain traditional knowledge, innovations and practices and promote their wider application "with the approval and involvement of the holders of such knowledge"; while 10(c) requires Parties to protect customary use by communities. These provisions clearly recognise the importance of community knowledge for biodiversity decision-making and the need to respect community rights to customary use of biodiversity resources.

The CBD's conservation work—notably the CBD Programme of Work on Protected Areas—has in recent years adopted a number of good governance principles and targets related to community rights. These are included in Element 2 on "Governance, Equity, Participation and Benefit-Sharing", adopted at the seventh Conference of the Parties following the Fifth World Parks Congress in Durban. They respond to the demands of indigenous and local communities for "full and effective participation" in decisions about establishing and managing protected areas; prior informed consent as opposed to being forcibly evicted; access to biological resources they traditionally use and manage; and equitable sharing of the costs of conservation, as well as the benefits.

Community access to genetic resources

While there is still a long way to go in turning these principles into practice, the first step—getting the principles agreed at CBD level—has at least been achieved. The same cannot be said for the ABS track, where the fundamental question of state versus community rights over genetic resources remains unresolved.[27] The CBD recognises "state sovereignty" over natural resources. This is important because it puts an end to free access to Southern countries' genetic resources without sharing the benefits. However, it is largely interpreted as government ownership, rather than *shared* sovereignty between government and other *state* actors, which is what it literally means. Furthermore, the CBD gives national governments the authority to determine access to genetic resources and grant prior informed consent.

Many genetic resources (eg. traditional crop varieties) originate from the territories of indigenous peoples who have improved and conserved them over generations, even if they are now held *ex situ*. Wild genetic resources are also actively managed, used and conserved by traditional farmers to complement and improve domesticated varieties and for their cultural value and ecosystem services. The CBD recognises the rights of indigenous and local communities to decide over the use of *traditional knowledge,* but not over the use of related genetic resources, even when they are the product or embodiment of traditional knowledge, are customarily used by communities and originate from their territories.

The widely respected non-binding *Bonn Guidelines on Access and Benefit-Sharing* recommend that "national procedures for PIC should facilitate the involvement of all relevant stakeholders from the community to the government level". This relates to decisions on access to genetic resources as well as traditional knowledge, "respecting established legal rights of indigenous and local communities associated with the genetic resources being accessed" whose prior informed consent should be obtained.

However, many national ABS laws, and the international ABS regime which is currently being developed, do not recognise community rights over genetic resources and hence undermine their customary rights, particularly given the obligation on states to facilitate access to genetic resources. Furthermore, third parties usually seek access to resources held *ex situ*. Community consent is not required for *ex situ* resources even if the resources originate from indigenous territories. The collections held *ex situ* can be accessed by scientists and companies for research and

27 Although the CBD Working Group on Article 8(j) has, however, recognised such customary rights.

commercial use, while local communities are usually denied access even if the resources were collected from their land (IIED *et al.,* 2006; Swiderska *et al*., 2006). Thus, the ABS framework effectively facilitates access to community resources by outsiders (eg. scientists, companies etc.), promoting a one-way flow of resources. This has led to calls for "reciprocal access" or "reversed access" to promote a two-way flow of genetic resources for mutual benefit (Swiderska *et al*., 2006; IIED *et al*., 2006).

In a first agreement of its kind, the six communities of the Andean Potato Park (Cusco, Peru) signed an agreement with the International Potato Centre (CIP) in 2004 for the return of traditional potato varieties taken from the park, many of which have been lost due to genetic erosion (see Part 2, Chapter 9). CIP also agreed not to allow patents on potato varieties taken from the park, and to share the benefits it has derived from past use of the potatoes. The agreement was brokered by the Peruvian NGO Asociacion ANDES, which argued that:

1. The CBD recognises the rights of communities over their traditional knowledge (TK) and that traditional crops form part of their TK systems.

2. The CBD Article 17.2 requires the repatriation or return of information of importance to indigenous and local communities and relevant for conservation.

3. The FAO Treaty recognises farmers' rights to TK and benefit-sharing.

This agreement sets an important precedent for other CGIAR[28] centres and botanic gardens seeking to contribute to the MDGs, *in situ* conservation and climate change adaptation. There has been significant genetic erosion over the last two decades, and many communities now need to restore their biodiversity if they are to cope with climate change (Swiderska *et al*., 2006).

It would be perfectly consistent with the CBD, the Bonn Guidelines and international law for governments to delegate prior informed consent (PIC) to indigenous and local communities where they are the local custodians of the genetic resources to which access is sought. This would also be in line with the CBD's ecosystem approach principles of decentralisation and community rights. Delegated or shared PIC would help ensure that the rights and cultural values of communities relating to genetic resources are respected. Such an approach has been adopted by some countries and is consistent with a number of international agreements on indigenous and human rights (see above). Although the CBD's ABS provisions only apply to *ex situ* resources collected after it came into force, human and indigenous rights instruments would nevertheless support delegated PIC for any genetic resources that originate from indigenous territories. However, the rights of communities over natural and biological resources and land are often unclear or unrecognised in national jurisdictions.

Participation in the ABS policy process

A related concern is the lack of participation of indigenous and local communities in the process to develop the international ABS regime. The Working Group on ABS has been mandated to negotiate the international regime on ABS and traditional knowledge protection *in collaboration with* the Working Group on Article 8(j), which is fairly open to indigenous participation. However, the process is being conducted within the ABS Working Group, with no mechanism for ensuring the effective participation of indigenous and local communities (IIED *et al*., 2006).

In January 2007 the UN Permanent Forum on Indigenous Issues (UNPFII) held an Expert Group Meeting on the CBD's international regime on ABS and indigenous peoples' rights. This meeting, along with the Sixth UNPFII meeting in May 2007, recommended that CBD Parties should recognise and respect indigenous peoples' rights to genetic resources on their territories. Indigenous organisations at the May 2007 meeting also prepared a Declaration on Indigenous Peoples' Rights to Genetic Resources and Indigenous Knowledge. This expresses concern at the accelerated development of an international regime on ABS and the failure of CBD Parties "to recognise the rights of indigenous peoples to control access to, and utilization of, the genetic resources that originate in our territories,

28 Consultative Group for International Agricultural Research.

lands and waters". It reaffirms the "spiritual and cultural relationship of indigenous peoples with all life forms" on their territories; and their fundamental role and responsibility to protect their territories, natural resources and ancestral knowledge for the benefit of their peoples and future generations. It also refers to the UN Declaration on the Rights of Indigenous Peoples, which states that: "Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage" including "human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora…" (Article 31). However, at the recent ABS meeting in Montreal, mention of the declaration was opposed on the grounds that it is not legally binding, and Northern countries did not commit to developing a legally binding agreement that would oblige them to share benefits.

6.4. Coherence between the biodiversity and trade agendas

The biodiversity and trade agendas are linked in a number of ways. These include the impacts of trade liberalisation and globalisation on biodiversity conservation and sustainable use; the international trade of endangered plant and animal species; the transboundary movement of genetically modified organisms; and the relationship between access to genetic resources, the protection of traditional knowledge and intellectual property rights (IPRs). This section focuses on this last point.

As a preface to the discussion it is important to note that linkages between the biodiversity and trade agendas form only a part of the overarching debate on how to reconcile global environmental and trade policy objectives. Potential conflicts between environmental agreements and trade rules arise because trade rules generally prohibit discrimination between similar products on the basis of their country of origin and prohibit quantitative restrictions such as bans. On the other hand, environmental agreements often require or permit parties to take trade measures to implement or enforce their commitments under these agreements (FIELD, 2005a).

The relationship between global trade rules and trade measures in environmental agreements is being considered in various international fora, including the WTO and UNEP, but international law does not provide a complete framework for managing this relationship. Within the WTO, the European Community and other OECD countries have advocated the reform of WTO rules to facilitate harmony. Southern governments have tended to be wary of efforts to accommodate multilateral environmental agreements (MEAs) in trade measures under WTO rules, despite the fact that it is often developing countries that support strong trade measures in MEAs. As long as this wider debate remains unresolved, the legal and political uncertainty it generates will affect our ability to improve biodiversity and livelihoods outcomes (Palmer and Tarasofsky, 2007).

A number of international and regional agreements and their attendant institutions overlap on the issues of access to genetic resources and benefit sharing, protection of traditional knowledge and IPRs. The WTO, Convention on Biological Diversity (CBD) and World Intellectual Property Organisation (WIPO) each pursues a different agenda based on different priorities related to these issues, and with varying levels of co-ordination.

Governance in the WTO

The WTO was established in 1995, and with 151 members, regulates over 97% of world trade. Its main objective is to enforce the rules for fair trade. A number of agreements have been negotiated under the WTO, including the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS, see below). The WTO's top level decision-making body is the Ministerial Conference which meets at least once every two years. Below this is the General Council (normally ambassadors and heads of delegation in Geneva, but sometimes officials sent from member capitals) which meets several times a year in Geneva. The General Council also meets as the Trade Policy Review Body and the Dispute Settlement Body. At the council level of the WTO, decisions are taken by the entire membership by consensus. Only members can vote on the basis of "one country, one vote". Non-governmental organisations (NGOs) have absolutely no voting rights. At the next level, the Council for Trade in Goods, Council for Trade in Services and Council for Trade-Related Intellectual Property (TRIPS) report to the General Council. Each of these higher-level councils has subsidiary bodies which are comprised of specialised committees and working groups that deal with individual WTO Agreements and general areas such as the environment, development and regional trade agreements (FIELD, 2005a).

Only member states and inter-governmental organisations (IGOs) with observer status may join council and subsidiary body meetings. Even so, observer status is granted on a fairly restricted basis, and a number of requests from IGOs remain outstanding. NGOs and other civil society groups are not eligible for observer status under WTO rules. The CBD Secretariat has been granted observer status for the WTO Committee on Trade and Environment (CTE) and may attend the CTE Special Sessions upon invitation. The CTE is mandated to examine "the relationship between the provisions of the multilateral trading system and trade measures for environmental purposes, including those pursuant to multilateral environmental agreements (MEAs)" (WTO, 1994). Nevertheless, more than ten years on, WTO members have not been able to reconcile their differing views on the WTO-MEA relationship. The CBD Secretariat has applied for observer status in the TRIPS Council, but the application remains pending. The same is true for the committees on Agriculture, Sanitary and Phytosanitary Measures and Technical Barriers to Trade.

While on paper the WTO governance system would appear fair, in practice (as with many global institutions), the structure of the WTO is skewed towards the interests of more powerful economies which have greatest influence over the agenda and negotiations (Swiderska, 2002b). They have greater bargaining power because they are bigger trading partners. The negotiation of the TRIPS agreement provides an example of this (see below). Similarly, well resourced industry lobbies have far more influence over member state positions than less wealthy public good lobbies (eg. environment and development organisations). Although they can't participate directly in the WTO, industry lobbies actively engage in global trade debates both in their home countries and at the margins of the official meetings.

The CBD and the TRIPS Agreement

The Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS) was one of a package of agreements that led to the establishment of the World Trade Organisation in 1994, as a result of the Uruguay Round of trade negotiations of the General Agreement on Tariffs and Trade (GATT). Prior to TRIPS, an international framework for intellectual property standards was in operation in the form of various treaties administered by the World Intellectual Property Organisation (WIPO). However, the US argued for international protection of IPRs at the Uruguay Round, claiming that it was losing billions of dollars through infringement of its intellectual property throughout the world, because WIPO had no means of enforcing its decisions. The result was TRIPS, which became effective in January 1995.

One of the stated objectives of the TRIPS Agreement is to provide a multilateral framework for promoting effective and adequate protection of IPRs, both to reduce distortions and impediments to international trade and to ensure that measures and procedures to enforce IPRs do not themselves become barriers to trade. The TRIPS Agreement allows patents to be granted for inventions that use genetic material and associated traditional knowledge without requiring that the provisions of the CBD in relation to prior informed consent and equitable benefit sharing are respected. Many WTO Members, mostly from the biodiversity-rich South, believe that these patenting provisions are inconsistent with the CBD as they limit access to genetic material and conflict with the sovereign rights of countries over their genetic resources.

The TRIPS Council has a mandate to examine the relationship between the TRIPS Agreement and the CBD. This examination is to be conducted in conjunction with the review of TRIPS Agreement Article 27.3(b) (see Box 13). While the CTE has the same mandate, and discussions in both the CTE and the TRIPS Council have followed the same trend, the TRIPS Council has been the forum where TRIPS/CBD-related issues have been explored with the greatest specificity, the impetus being the review of Article 27.3(b) (FIELD, 2005b).

Applicability of TRIPS to traditional knowledge

Unlike the CBD, the TRIPS Agreement does not include any provisions for protecting traditional knowledge. Some WTO members have expressed concern that traditional knowledge, which is generally developed over a period of time and codified in texts or retained in oral tradition over generations, may not meet all the conditions required for the granting of certain IPRs under existing regimes (eg., novelty, inventive steps and industrial applicability)

(FIELD, 2005b). The WTO has also failed to consider the concerns of traditional knowledge holders and indigenous groups to prevent unauthorised commercial use and patenting of their knowledge, or "biopiracy". Some indigenous groups oppose the privatisation of communally held knowledge and biodiversity and patents on life for ethical and cultural as well as livelihood reasons (Swiderska, 2006; Box 14).

Box 13. Patenting and TRIPS Article 27.3(b)

Article 27.3(b) requires countries to make available patents for micro-organisms, microbiological and non-biological processes. Plant varieties must come under an IPR regime which may be patents or a unique (*sui generis*) alternative. Genetic and biochemical resources are not specifically excluded, which means that patents must in principle be made available for them, provided they are new, involve an inventive step and are capable of industrial application (Dutfield, 2003). Thus, countries which sign the WTO to access the trade advantages must also implement TRIPS, by raising national standards for protection of intellectual property and introducing protection for subject matter not previously covered in most developing countries. While many of the provisions of TRIPS reflect requirements of earlier IPR agreements, such as the Paris and Berne Conventions, there are additional requirements, particularly with respect to new technologies. Given their "informal" nature, traditional knowledge and innovations of farmers and local communities are not covered by the TRIPS agreement. These provisions have caused great concern in developing countries because they enhance global protection for "formal" innovations that satisfy patent requirements, without protecting traditional innovations—thus favouring the interests of technologically advanced countries and large corporations (Swiderska, 2004b).

Article 27.3(b) has been the subject of controversy since its initial drafting, but to avoid postponing an agreement on global trade rules, members scheduled a review of Article 27.3(b) provisions four years after the TRIPS Agreement entered into force, ie. in 1999. The two main issues which highlight the nature of the ongoing debate in the TRIPS Council are the (1) patentability of genetic resources; and (2) prior informed consent and benefit sharing. According to some developing countries, the TRIPS Agreement should require patent applicants to disclose, as a condition of patentability:

- The source of any genetic material used in a claimed intervention.
- Any related traditional knowledge used in the invention.
- Evidence of prior informed consent from the competent authority in the country of origin of the genetic material.
- Evidence of fair and equitable benefit sharing.

Brazil, India and other biodiversity-rich WTO members have called for an amendment to the TRIPS Agreement which requires: (1) disclosure in patent applications of the country of origin of any biological resource and traditional knowledge used; and (2) evidence of prior informed consent and the fair and equitable sharing of benefits derived from the patent (Palmer and Tarasofsky, 2007).

For plant varieties, Article 27.3(b) provides a certain degree of flexibility to members in deciding on the most effective means of protection by allowing them to adopt an effective sui generis system. TRIPS Council discussions have identified a need for (1) clarification of the term "sui generis" and the setting of criteria to measure "effective" systems; (2) discussion on the relationship between the TRIPS Agreement and the International Union for the Protection of New Variety of Plants (UPOV) Convention; and (3) discussion of the relationship with traditional knowledge and farmers' rights.

Box 14. Indigenous views on patents

Many indigenous groups oppose the use of patents for genetic resources. They believe that "life cannot be bought, owned, sold, discovered or patented, even in its smallest form" (IPCB, 1995) They feel that patents that create private monopoly rights over parts of their heritage go against their responsibility to maintain and defend the integrity of nature for local needs and future generations. They therefore oppose the ABS framework and international regime because it facilitates access to genetic resources for commercial use, including the use of patents. Patents over community resources and knowledge can prevent customary use and seed saving by communities, and are being granted increasingly easily under global IPR regimes. Nevertheless, CBD Article 16(5) requires Parties to co-operate in order to ensure that patents and other IPRs "are supportive of and do not run counter to" the objectives of the convention.

The CBD, along with a host of other environment, social and human rights agreements, is effectively subordinate to the WTO and the TRIPS agreement, and does not have the enforcement power afforded by the WTO's dispute settlement and sanctions mechanism. However, both the national implementation efforts and the Doha-mandated review of TRIPS offer some scope for interpreting, amending, or supplementing the TRIPS Agreement to align IPRs with the objectives of the CBD. The TRIPS agreement provides some flexibility by allowing the use of *sui generis* laws for plant variety protection, which could include recognition of rights of farmers and indigenous peoples over their plant varieties and seeds (IIED, 2004).

The biodiversity agenda and other global IPR fora

The World Intellectual Property Organisation (WIPO) promotes the development of international standards for the protection of intellectual property. It has been criticised by civil society groups and Southern governments for failing to consider the full range of public policy goals relevant to IP policymaking in developing countries (3D, 2006). This resulted in a drive by a number of WIPO member states and observers to push for a WIPO Development Agenda. After three years of work, WIPO members were planning to put 45 recommendations for action, including a new Committee on Development and Intellectual Property (CDIP), before the WIPO General Assembly at its meeting in September 2007 (WIPO, 2007).

WIPO and the CBD Secretariat collaborate on an ongoing basis and they have exchanged information on the issue of disclosure requirements related to genetic resources and TK in IPRs applications. In 2001 WIPO set up an Inter-Governmental Committee on Genetic Resources, Traditional Knowledge and Folklore (IGC). The IGC is developing a system for disclosure of origin of genetic resources and TK in patent applications to promote compliance with national ABS regulations. It is also developing policy guidance for *sui generis* systems to protect TK from misappropriation.

While these initiatives are welcomed, there is concern amongst indigenous people that they cannot play an active part in the decision-making process to set standards for the protection of their ancestral knowledge. Some may argue that such participation is not called for as it is an inter-governmental process, but there are fora within the UN system where indigenous representatives are allowed to participate actively along with governments (eg. the UNPFII and the CBD Working Group on Article 8(j)). Some indigenous people were consulted through WIPO's "fact finding" mission and a number of important technical issues were explored. However, the concern is that the needs, aspirations and rights of indigenous people who are the holders of traditional knowledge will not be sufficiently addressed, nor will the objectives of the CBD, given that the participants in WIPO/IGC meetings are mainly IPR/patent specialists. Indigenous peoples are calling for protection of their knowledge to be in accordance with their customary laws and human rights, rather than being guided by Western IPR norms. But industrialised countries stress the need to conform with existing IPR standards (IIED *et al.*, 2006).

Discussions in the IGC can be broken down along classic North-South lines. Biodiversity-rich developing countries call for an international legally-binding instrument to protect genetic resources, TK and folklore against

misappropriation, while Northern industrialised countries, such as Canada, Japan and the US, favour a non-binding regime. At the last IGC meeting in July 2007, about the only thing WIPO member states could agree on was to request the WIPO General Assembly for a renewal of the IGC's mandate (ICTSD, 2007).

Other relevant treaties include the 1991 International Union for the Protection of New Varieties of Plants (UPOV) Convention which grants patent-like rights over new plant varieties to plant breeders; and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGR), which recognises farmers' rights to traditional knowledge and benefit-sharing (see above). However, since the FAO Treaty's approval in 2001, some Southern countries have chosen to develop laws that institutionalise plant variety protection systems and monopolistic IPRs at the expense of the rights of farmers to their seeds, or without giving farmers' rights the same level of protection (eg. the Philippines and India). This could undermine the role of farmers in conserving and improving genetic diversity, thus undermining biodiversity itself.

Skirting global governance structures through FTAs

The world's biodiversity is also increasingly at threat from the rapid spread of regional and bilateral free trade agreements (FTAs) between the US and European Union and various Southern countries/regions. These trade promotion agreements can have far reaching implications for biodiversity and rural livelihoods, for example by opening up markets for export agriculture and requiring changes in the trade regimes of Southern countries to favour the interest of corporations (eg. life science/seed companies). In many cases they require Southern countries to upgrade their IPRs beyond WTO/TRIPS requirements (eg. to make available patents for plants) and sign up to other IPR treaties such as UPOV for protecting the rights of commercial plant breeders; hence they are sometimes referred to as "TRIPS-PLUS". FTAs have also been used to promote biotechnology products with no reference to commitments under the Biosafety Protocol.

Given the current slowdown in international trade negotiations under the provisions of the WTO's Doha Ministerial Declaration, the quicker solutions provided by FTAs may appear practical. However, as they are removed from the spotlight of the multilateral arena, there is increased risk that special well-funded interests will hold greater sway in the negotiating process, especially where the bargaining power of the negotiating parties is unequal. More often than not, FTAs are developed by national-level trade departments in collaboration with industry, often with very little or no involvement of environment departments and civil society (Siegele *et al*., 2006). The US-Mexico FTA, for example, has effectively removed the rights of civil society to genetic material and to protest against the agreement, since the FTA rules override all national laws.

PART 2
COUNTRY CASE STUDIES

Introduction

Part 2 presents the findings of country case studies or "situation analyses" on biodiversity governance conducted in India, Tanzania and Peru between 2005 and 2007. All three are "mega-diverse" countries which also have high levels of rural poverty; and all three ratified the Convention on Biological Diversity (CBD) over a decade ago. The main objectives of the case studies were to:

1) Review biodiversity governance in each country (mainly at national level): policies, institutions, processes, etc.

2) Identify key issues and approaches for more in-depth action-research.[29]

For each case study, the following issues were explored with a range of stakeholders (government departments, state governments, conservation NGOs, researchers, social activists, CBOs and indigenous and local communities):

Integration of community participation and livelihoods into policies and institutions for biodiversity, protected areas, wildlife and forests.

- Implementation and scaling-up of community forest and wildlife management.
- Mainstreaming biodiversity into sectoral policy and planning (agriculture, poverty reduction, rural development, trade and transport).
- Policymaking and implementation processes: stakeholder participation, information flows, feedback from local experience, institutional change.
- Improving biodiversity governance (tactics for policy influence, priorities for action-research).

The questions set out in Box 1 (Part 1, Chapter 1) were used to guide the analysis. Each case study focuses on issues which were particularly important for the country at the time, and highlights experiences that provide useful lessons for others. The Tanzania study focuses mainly on implementation of participatory forest and wildlife policies and mainstreaming biodiversity in development policy (the MKUKUTA); the Peru study highlights mainstreaming biodiversity in development sectors and poverty reduction strategies; and the India study covers all these issues.

The studies were conducted in collaboration with in-country partners, and entailed national policy reviews, multi-stakeholder interviews and workshops, and a local study on biodiversity-poverty links with Quechua communities in Peru. The research process was itself used to promote policy dialogue and collective action on biodiversity governance and livelihood issues in the focal countries, by bringing together different actors—local communities and policymakers, environment and development sectors—to discuss particular concerns. The resulting analyses are not comprehensive but provide a starting point for further processes of analysis, learning and action.

29 "Action-research" is the process of generating knowledge through action. Combining research with action is useful where research alone is likely to have limited impact, eg. due to power disparities.

CHAPTER 7. INDIA

Krystyna Swiderska and Neema Pathak[30]

Research background

- The India case study draws on the following activities:
- Interviews with different stakeholders in New Delhi, August-September 2004.
- Stakeholder meeting to discuss the interview findings, New Delhi, September 2004.
- Multi-stakeholder workshop on *Biodiversity and Environmental Governance: Safeguarding Ecosystems for Human Wellbeing*, organised by IIED and Winrock International India, New Delhi, December 2006.

India is one of the most biodiverse countries in the world, supporting a range of ecosystems (forests, wetlands, grasslands, marine, dryland) and 137,000 wildlife species (Acharya, 2007). It also has a wealth of agricultural and livestock diversity, including several thousand landraces of rice, sorghum, millets and oilseeds. About 70% of the country's population depends on local ecosystems for subsistence requirements like food, water, medicine, housing and fodder (Apte, 2006b). About 200 million people in India are partially or wholly dependent on forest resources for their livelihoods (Khare *et al*., 2000).

The poorest people are particularly dependent on biodiversity for income, food, agriculture, health, fodder etc. Consequently, when access to or availability of these resources is restricted, poverty is perpetuated. Poor women play an important role in sustaining biodiversity in farming systems and in providing food, health and fuelwood for the family, which means that they are often most affected by environmental degradation (eg. deforestation forces women to travel for miles to collect wood). Thus, biodiversity and poverty are strongly interlinked and need to be addressed together.

7.1. Wildlife conservation policy

Evidence suggests that local communities were in daily control of natural resources for most of India's history, even though ownership of land and resources was often vested in rulers. Over the centuries or millennia of community-based management, diverse resource governance institutions emerged at village or supra-village level (including sacred spaces and landscapes). Moves by the British colonial government to consolidate its ownership and control over the commons (including forests and wetlands) through a centralised management system had a devastating impact on such community-based institutions, customary laws and management regimes. The centralisation of management has continued well after independence in 1947, leaving most villages without the capacity or institutions to manage common lands on their own (Kothari and Pathak, 2006b).

Many of India's conservation institutions date back to the 1970s and 80s when there was a one-party government. The Wildlife Protection Act (WLPA, 1972) and the Forest Conservation Act (1980) were enacted to stop the rampant destruction of wildlife and forests. These laws significantly reduced the destruction of forests, wildlife species and habitats, but centralised powers over natural resources in the hands of the union and state governments (Kothari and Pathak, 2006b).

The WLPA provides for two main categories of protected areas: national parks (strict protection) and sanctuaries (certain activities may be permitted). The vision behind the WLPA is essentially exclusionary, seeing local residents as ignorant resource users at best, and enemies of wildlife at worst (Kothari and Pathak, 2006b). Community traditions of conservation, spiritual beliefs that contributed to conservation and institutions for resource management were neglected and in some cases actually dismantled (Kothari and Pathak, 2006b). Most national parks and sanctuaries

30 With inputs from Madhu Sarin, Tejaswini Apte, Kanchi Kohli, Ashish Kothari and Seema Bhatt.

have extinguished or severely curtailed the land and forest rights of people living in them, resulting in acute conflicts between local people and protected area managers (Khare *et al*., 2000). Displacement of communities is associated with many protected areas, often without adequate notification or resettlement/compensation. The hostility between local people and protected area managers has made the task of conservation more difficult (IIED and Winrock India, 2006).

A more participatory focus?

Over the last decade there have been some "participatory" conservation programmes (eg. supported by the World Bank) which have focused largely on providing alternative livelihoods for people living in and around protected areas to divert human pressures. Their emphasis on alternative incomes has helped to promote a slight shift towards more participatory park management in some cases, but these "eco-development" programmes have also been criticised for not addressing the resource claims of communities and restricting access to natural resources. Devolving resource rights and management responsibility to local communities and allowing sustainable use are likely to yield better results for both conservation and livelihoods in many cases. However, a wholesale transition to community-based management in and around protected areas may be unfeasible as long as external policy and governance conditions remain largely unsupportive.

Years of consultations led to the 2002 Amendment to the WLPA, which could have been a landmark in participatory conservation in India. However, it has merely paid lip-service to community participation. While it adopted provisions for more participatory conservation, in some instances the Act reneged on positive recommendations by the committee and many of the amendments contradicted what had been suggested by many NGOs during the consultations.[31] The amendment suggested a role for villagers in Sanctuary Advisory Committees, and introduced two new categories of protected areas where community "participation" was envisaged: conservation reserves and community reserves. But conservation reserves do not really give any management powers to community members, while community reserves only apply to community or private lands, whereas most community conserved areas are on government owned lands. Across India there are hundreds, possibly thousands, of instances where communities are conserving and managing wildlife/biodiversity-rich habitats that belong to the government, without legal backing or recognition (Pathak, 2002).

The National Wildlife Action Plan (2002) also suggested a number of measures to involve citizens in conservation, but has so far not had major policy, legal or practical impact (Kothari and Pathak, 2006). In fact, the last few years have instead seen a growing number of protectionist measures and a shift towards more top-down policymaking. The Central Empowered Committee, constituted by the Supreme Court of India, has played an active role in this, alongside the wildlife lobby. For example, following a case filed by WWF India against the Union of India, the court passed an order in 1997 to expedite the process of settlement of rights in protected areas within a year. This order has had tremendous impact on the people around protected areas and led to displacement in many cases. In the Great Himalayan National Park, when the settlement of rights took place in 1999, the rights of NTFP collectors and nomadic pastoralists were extinguished, which mostly affected the poorest people dependent on park resources (IIED and Winrock India, 2006).

More recently, the Supreme Court directed that no further removal of timber, grasses etc. should be permitted from national parks and sanctuaries. Though this order was meant to stop a state forest department from continuing timber felling inside parks and sanctuaries, the MoEF interpreted it to mean that no rights at all could any longer be exercised in such areas (Kothari and Pathak, 2006). This ban is having serious impacts on livelihoods; for example 22 people including 12 children have died of malnutrition in Satkosia Gorge Sanctuary of Anugul District (EC Watch, 2006). Such measures aimed at stemming the rapid loss of forests and wildlife are undermining rather than contributing to both conservation and social justice (Sarin, 2005).

Occurring alongside this continued centralisation of power over natural resources through conservation policies is a contrasting process of decentralisation. Two constitutional amendments in 1992 provided for devolving much greater administrative and political functions to local self governance institutions in rural (*panchayats*) and urban

31 Comments on the *Wildlife (Protection) Amendment Bill 2002*, by Kalpavriksh.

areas (municipal bodies). The 73rd Amendment to the Indian Constitution enables states to recognise *panchayats* as institutions of self-government, and provides for more decentralised governance of natural resources. In 1996, these changes were extended to Scheduled Areas (*Panchayat* Extension to Scheduled Areas, PESA) which have predominantly indigenous or tribal populations, conferring greater control over natural resources to traditional village assemblies, including ownership rights over non-timber forest products (NTFPs).

However, PESA has only been weakly implemented. Little effort has been made to explain and implement it on the ground, and most states have retained control over the most valuable NTFPs. Furthermore, village institutions, including *panchayats* and *gram sabhas,* were provided virtually no powers or role in the WLPA or the Forest Conservation Act (Kothari and Pathak, 2006), while the MoEF interpreted nationalised forests and protected areas as being excluded from PESA. The dissonance between tribal rights and forest conservation laws is a key obstacle to achieving their objectives (Sarin, 2005).

Brutal evictions of tribal peoples and other forest dwellers from forest lands due to their being labelled "encroachers" under the Forest Conservation Act led to a national campaign for recognition of their forest rights, resulting in the enactment of a new law tabled by the Ministry of Tribal Affairs (see below). There has also been a re-emergence of community-based natural resource management across India, either a continuation or modification of past regimes or entirely new initiatives. This "informal" decentralisation has improved conservation prospects in many areas. It has led to more transparent governance, greater ability to monitor the resource, and improved collective management and incentives for conservation as benefits are realised by the community. However, in some cases, such devolution could lead to ecological loss if communities (or their more powerful members) were to sell off resources for short-term gain (Kothari and Pathak, 2006).

7.2. Biodiversity legislation in India

The National Biodiversity Act

Adopted in 2002, the National Biodiversity Act provides the only legal framework for biodiversity as a whole in India.[32] Its objectives mirror those of the CBD: the conservation and sustainable use of biodiversity and equitable benefit-sharing from the use of genetic resources. The act establishes biodiversity institutions at three levels: the National Biodiversity Authority (NBA), State Biodiversity Boards, and village Biodiversity Management Committees (BMCs) for decentralised management. Foreigners seeking access to genetic resources must obtain the permission of the National Biodiversity Authority in consultation with State Biodiversity Boards (SBB).

While the Biodiversity Act has some progressive clauses, the Biodiversity Rules developed to implement it do not provide communities with clear responsibilities for biodiversity management. They limit the role of BMCs to the preparation of peoples' registers of biodiversity and related traditional knowledge. Decision-making for implementing the act, including access to genetic resources and traditional knowledge, is centralised in state and national biodiversity bodies, with BMCs only having an advisory role when consulted by the NBA and SBB. The act recognises community rights over biodiversity and related traditional knowledge and mandates the government to protect traditional knowledge, but this is not included in the rules. Furthermore, the rules do not recognise the rights of tribal communities to natural resources and self-governance, despite this being required by the *Panchayats (Extension to Scheduled Areas) Act, 1996* (PESA) under Schedule V of the Indian Constitution (see below).

The Biodiversity Act took a number of years to develop and underwent a fairly consultative process involving various experts and NGOs (see Anuradha *et al.*, 2001). For the Biodiversity Rules, many NGOs made detailed comments during the year-long consultation process, but few of these were taken on board. Thus, many civil society organisations view the rules as yet another means to weaken community control over natural resources, and are calling for an alternative framework for decentralised biodiversity management.[33]

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32 The forest and wildlife acts also aim to promote conservation, but do not deal with biodiversity as a whole.

33 *Report of the Workshop on the Biodiversity Act and Rules*, Deccan Development Society, GRAIN and Kalpavriksh, Hyderabad, September 2004; *Report of the Workshop on Biodiversity Regulation: Control and Conservation*, DDS, Kolkata, 2006.

State implementation

Seventeen state governments have set up State Biodiversity Boards, and it is hoped that these will include "people with integrity and competence that listen to people from the field" (Madhu Sarin, pers. comm., 2004). Although the act provides for the participation of "experts", the SBBs mostly include scientific experts and community participation is very weak or absent as they are not normally considered to be experts. Madhya Pradesh is the exception, with two community members on the SBB, and involvement of communities through district support groups and popular communication in local languages. Similarly, although the Biodiversity Act requires the National Biodiversity Authority to include "conservers, creators and knowledge holders of biological resources", the NBA has no representation of tribal or local communities or "independent" NGOs.

The Biodiversity Act also envisages the establishment of Biodiversity Heritage Sites, which have yet to be defined, but could be used to support community biodiversity management in mixed agro-biodiversity and wildlife landscapes. They should be implemented in an inclusive manner, to avoid creating hostility (unlike national parks). As with BMCs, they should be established through a flexible approach which allows for different local contexts and local innovations, using a gradual, bottom-up, participatory process (IIED and Winrock India, 2006).

At a national workshop on Biodiversity and Environmental Governance in India (IIED and Winrock India, 2006), a number of issues were raised about the implementation of the Biodiversity Act and Rules, including:

1) The rapid development of people's biodiversity registers (PBRs) in many states, but without legal recognition of community rights over the information in the PBRs, could facilitate biopiracy.

2) The need for landscape-based approaches such as community conserved areas to effectively safeguard and protect community knowledge (particularly in the current context of accelerated foreign investment in India).

3) The need to improve the *panchayat* system in order to strengthen community involvement in biodiversity governance.

4) The need for better funding for the State Biodiversity Boards (eg. from international donors or central government funds) to be able to implement biodiversity policy, influence the agendas of sectoral departments and proactively promote integration of biodiversity in development policy and planning.

5) The need for NGOs to raise awareness among local people about the Biodiversity Act and BMCs.

6) The need for greater attention on and funding for the conservation of agro-biodiversity *in situ*.

In view of these concerns, and the lack of power of BMCs in particular, the civil society Campaign for Community Control over Biodiversity has since 2004 organised a number of petitions and actions, including sending *panchayat* resolutions to MPs and the Prime Minister of India, but there has been no response.

7.3. Wildlife *versus* people lobbies

Conservation policy (ie. wildlife, forest and protected area policy) in India is largely controlled by a powerful "wildlife lobby", which includes the MoEF, large conservation NGOs and urban elites. The wildlife lobby tends to deal with biodiversity as a conservation issue alone, without also seeing it as a resource linked to people's culture and livelihoods. As Khare *et al*. (2000) note, conservationists "have considerable influence on forest policy which belies their small number".

Many civil society organisations in India are calling for more inclusive and equitable approaches to protected area management. However, these "people-centred" conservation NGOs and social activists have less influence over wildlife policy. The more vocal NGOs are no longer included on many advisory committees. Following industry pressure, only those who tow the government line are included. There is limited participation of CBOs in

biodiversity policy and very little participation of representatives of affected communities. There is a need for a far more transparent process leading up to the enactment of any new law. NGOs and CBOs have to react to new laws after they have been approved and are either not informed when major acts are developed, or their comments are not taken on board.[34]

International agencies have had considerable influence over some state forest regeneration and wildlife conservation programmes, and have variously attempted to use their financial muscle to influence state and central government policy (Khare *et al*., 2000). However, their influence on policy has decreased as India's economy has grown and all but the five biggest donors have been asked to withdraw their support. Only the World Bank still has an influence over conservation policy, given that it is the biggest donor to biodiversity projects with large programmes for joint forest management (JFM) and eco-development.[35] However, despite the rhetoric of its new forest policy (see section below on JFM), the Bank has not been assertive with respect to the rights of communities.

The wildlife lobby does not recognise the role that local people have played in sustaining biodiversity for centuries or the fact that biodiversity has existed for a very long time alongside them. Two myths often inform decision-making, despite much evidence to the contrary:

1) The poor are responsible for environmental degradation.

2) Environment and development cannot be achieved together.

These are simplistic, exaggerated and misleading arguments: the rich are responsible for much environmental degradation, and win-win approaches can be found (Saxena, 2006).

Local people will naturally protect any resources over which they have secure rights, whether in rural or urban areas. It is only when their stake is uncertain that they will take all they can, for example when they could be moved off their land at any time, as is the case for many people living in and around protected areas[36]. Thus, the notion that in order to achieve conservation in protected areas there is a need to stop all local livelihoods, including customary resource use, is very misguided (IIED and Winrock India, 2006). The overall process of degradation occurs through a series of human interventions; multiple actors, including the forest industry, tend to be involved in disturbing the same area of forest at a given time and at different points in time (Khare *et al*., 2000). At the same time, local communities are not always coherent groupings: some may over-exploit forests, while others are organised to protect them.

Environmental concern must go "beyond pretty trees and tigers", since biodiversity is a real source of life for hundreds of millions of people in India. One hundred million people—three million of whom live inside parks and sanctuaries—are dependent on forest resources. Therefore co-existence is a better model, although in some cases inviolate spaces may be needed. A recent study of Madhav National Park (Madhya Pradesh) concludes, "Park policy ignores locally-embedded ability to protect biodiversity and willingness to be educated to that end. Consequently, site-specific strategies are required that build not solely upon biology or economics but combine these concerns with sensitivity to the lower strata of people that live around the park" (Saxena, 2006).

Furthermore, there is evidence that more inclusive and equitable approaches are improving conservation outcomes. In the Great Himalayan National Park, for example, a local NGO, SAHARA, has helped establish women's associations and has arranged for people displaced from the park to be employed as tourist guides. As a result, local attitudes to the park are improving and many of those who were poachers now support the park. A recent study based on satellite imagery found that the quality of forests managed by village councils, despite having no funds or support, is as good as government reserve forests (Sarin, 2005).

34 Report of the *Workshop on the Biodiversity Act and Rules*, Deccan Development Society, GRAIN and Kalpavriksh, Hyderabad, September 2004.
35 Between 1995 and 2000, donors provided an estimated $1.5 billion to biodiversity projects in India, the largest donor being the World Bank, followed by Japan and DFID (NBSAP Report India, Chapter 6) [FULL REF NEEDED]. The corporate sector also provides funding for biodiversity initiatives, including protected areas, rural livelihoods, and support to NGOs.
36 Comments from Stakeholder Meeting for this project, Delhi, 2004.

Conservation in practice is about sociology first and foremost, but social issues are left to the end of park management plans. The whole process needs to be reversed so that social issues are addressed in the first or second chapters. The bureaucracy is becoming the "implementer" in conservation, when in fact it should be the facilitator and the community should be the "implementer", supported by the necessary budget. Park managers and bureaucrats should be trained as sociologists and facilitators, rather than biologists and managers (IIED and Winrock India, 2006).

7.4. National biodiversity strategy and action plan[37]

A participatory process

Between 2000 and 2003, a national biodiversity strategy and action plan (NBSAP) was developed which placed significant emphasis on livelihoods, its main goals being biodiversity conservation, ecological security and livelihoods security. Development of the NBSAP, which was funded by UNDP/GEF, was handed over to an NGO (Kalpavriksh) in a significant departure from the usual consultant-led planning process. This move was made by the Ministry of Environment and Forests (MoEF), thanks to the vision of the officials in charge, and despite resistance from some who wanted the process retained within the ministry. A Technical and Policy Core Group was established to co-ordinate the process, and this included experts and activists from various biodiversity disciplines (science, livelihoods and rights). A national Steering Committee provided overall guidance for the process, and consisted of senior officials from the MoEF, representatives from different ministries, the Planning Commission and NGOs. The National Project Director was from the MoEF (a Joint Secretary and then a Director) (Bhatt *et al*., 2006).

The resulting process was unique in terms of scale, decentralisation and people's participation. Nearly 200,000 people participated, including thousands of local farmers and resource users, as well as many scientists and technical experts. It was based on the premise that: i) biodiversity has ecological, cultural, spiritual and economic value and planning for its conservation should therefore be shaped by as many people as possible, especially those whose livelihoods depend on natural resources; and ii) the wider the ownership of the process, the greater the chances of the plan being accepted and implemented (Apte, 2005). The NBSAP process also sought to promote integration of biodiversity and related livelihoods into sectoral policy and planning.

Country-wide consultations were held at state, sub-state and village level, and more than 70 state, sub-state, thematic and inter-regional plans were formulated, in addition to a national plan. Each action plan was formulated by a nodal agency (eg. state government) or working group, together with multi-stakeholder committees. Public hearings and meetings were held at sub-state level to engage a wide range of local actors. All the state and sub-state plans were directed by local people, including grassroots representatives, NGOs, academics, government officials etc. The Deccan Sub-state Action Plan, for example, facilitated by the Deccan Development Society, focused entirely on agricultural biodiversity and most of its recommendations were based on inputs from predominantly women farmers (20,000 farmers participated in meetings held in 62 villages).

Awareness-raising was central to the process, including an NBSAP media campaign (eg. radio channels were encouraged to broadcast biodiversity issues on science programmes), NBSAP newsletters, a "call for participation" brochure and local biodiversity and seed festivals (Apte, 2006b; Bhatt *et al*., 2006). Innovative tools were used such as a mobile Biodiversity Festival which travelled from village to village (and was seen by about 50,000 people), and interactive radio, to actively engage local people (Apte, 2006b; Apte, 2005).

Despite the exemplary participatory process and momentum generated, the government has not taken many of the results on board. Although the NBSAP process had been initiated and supported by the MoEF, the ministry was reportedly displeased with parts of the plan prepared by the Core Group, such as a statement that India's current development paradigm is environmentally unsustainable. It may also have been unsupportive of the NBSAP's recommendations to strengthen environmental impact assessment (EIA) regulations for development and industrial projects, which appear to run counter to India's rapid economic growth plants.

37 **For further details and lessons on the NBSAP process, see also Bhatt and Kohli with Kothari (2006).**

Instead the MoEF released its own plan, apparently developed without any public consultation. This was released as a draft NBAP in 2007, three-and-a-half years after the participatory process ended. The government's NBAP is very different from the Final Technical Report that came out of the NBSAP process. Only about a third of the strategies of the final NBSAP report are included, and many of the specific actions have been left out (eg. for integrating biodiversity into various sectors). Other important sections—on governance, land use planning, people's participation and linking biodiversity and food security—were also missing. The release of this very different plan with no explanation of the changes and no consultation with the NBSAP Core Group has not helped the already strained relations between the MoEF and environmental civil society.

After waiting almost two years for the ministry to release their NBSAP report,[38] Kalpavriksh and the Core Group independently printed and distributed it. This move angered the MoEF and led to bad blood between them and those pressing for the NBSAP to be adopted. As one author put it, "the position taken by the ministry in this case is indicative of a larger malaise of non-accountability and non-transparency which seems to have been on the increase over the last few years" (Apte, 2006a).

Lessons for similar processes

On reflection, it seems that more should have been done to get political support for the NBSAP report. Although the process went all out to engage marginalised people, it did not succeed in (and made relatively little effort to) get the power wielders on board: the big sugarcane farmers, tea garden owners, industries, trade unions and politicians (Apte, 2006a). "The ministry could afford to suppress the plan because it was predominantly supported by 'marginalised' groups" (Apte, 2006b).

Nevertheless, the NBSAP's participatory process has yielded some important results, and valuable lessons for bottom-up planning process. Despite the NBSAP not being adopted for some time, some states adopted their own action plans and have started to implement them. The process also empowered local people in a number of ways, such as building the capacity of small grassroots NGOs which previously had little access to information, and of decentralised co-ordinating agencies (eg. state governments) and other participants to address biodiversity issues. The networking process was also very valuable and people were demanding that this be continued.

The entire three-and-a-half-year process was conducted with a budget of only about US$ 916, 500. Strong commitment to keeping budgets low and the use of volunteers enabled this.

Some of the key lessons to emerge from the NBSAP process are as follows:

- It is vital to build in a political strategy from the start—not just to get the support of politicians and MPs, but also of other powerful lobbies, including industry—to help ensure the formal adoption of the final product.

- The process is as important as the product—wide participation generates ownership, promotes implementation, builds capacity and strengthens democracy.

- Tailoring the message to the audience is important. The NBSAP media campaign tried to speak to a range of actors in the same way, rather than making the business case to engage business etc. The few sectorally-oriented initiatives tended to be opportunistic rather than strategic. By contrast, Karnataka's state action plan used a complementary cluster of tools to reach out to different sectors and get inputs from them. This strategic complementarity of tools to target diverse sectors was missing from the national media campaign (Apte, 2006b).

- Participatory planning need not be expensive. The NBSAP process was conducted with the same budget as a conventional planning process, spread amongst 71 co-ordinating agencies across the country. Voluntary contributions to the process helped generate wide ownership and make the process more sustainable. But the

38 The MoEF kept promising to release the plan, but not doing so.

value of voluntarism and spreading budgets thinly needs to be balanced with the practical requirements of achieving desired goals (Apte, 2006b).

7.5. Towards rights for pastoralists, tribal peoples and forest communities

Pastoralists are mainly landless people who depend on common pasturelands for rearing livestock for their livelihoods. They have an important role to play in conserving diverse livestock breeds. They have been drastically affected by protected areas. Denial of traditional grazing rights in parks and sanctuaries and loss of livestock to wildlife (eg. tigers or panthers) are major concerns. There are heavy penalties for grazing in sanctuaries. In Tamil Nadu, for example, a Supreme Court ban on grazing in national parks and sanctuaries is a real problem for pastoralists, threatening to wipe out their unique lifestyle and livelihoods altogether (IIED and Winrock India, 2006). As well as a lack of participatory planning when a new sanctuary is declared, pasture is being lost to make way for commercial ventures, eg. eucalyptus, and, more recently, *jatropha* plantations for biofuel.

Box 15. Salient features of the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

This act recognises and vests heritable (but inalienable and non-transferable) forest rights, which secure individual or community tenure or both, in forest dwelling scheduled tribes (FDSTs) and other traditional forest dwellers who have occupied forest land before the cut-off date of 13th December 2005. This includes scheduled tribe pastoralist communities, as well as "other traditional forest-dwellers" (ie. any member or community who has primarily resided in and depended on the forest or forests land for *bona fide* livelihood needs for at least three generations).

The forest rights covered by the act include:

- The right to own, collect, use and dispose of minor forest produce which has been traditionally collected; and other community rights of use or entitlements such as fish and other products of water bodies, grazing (both settled and transhumant) and traditional seasonal resource access by nomadic and pastoralist communities.
- The right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.
- The right of access to biodiversity and community rights to intellectual property and traditional knowledge related to biodiversity and cultural diversity.
- The right to *in situ* rehabilitation, including alternative land in cases where the scheduled tribes and other traditional forest dwellers have been illegally evicted or displaced from any forest land without receiving their legal entitlement to rehabilitation prior to 13th December 2005.
- Other traditional rights customarily enjoyed by the FDSTs and other traditional forest dwellers, excluding the traditional right of hunting or trapping or extracting a part of the body of any species of wild animal.

The Act also *empowers* forest rights holders, *gram sabha* and village institutions in areas where there are forest rights-holders to undertake a number of conservation duties. The act is the first legislation to elaborate the *process* of determining rights via committees at *gram sabha* (village), sub-divisional and district levels. All the three levels must include representatives from tribal, revenue and forest departments, as well as three elected representatives. The state government also constitutes a State Level Monitoring Committee (SLMC) to monitor the act. However, the committees do not have to include relevant social action and conservation NGOs and individuals active in the area.

Source: Lovleen Bhullar, FIELD intern, March/April 2007.

Pastoralists' grazing claims are often countered with arguments that the cattle will destroy biodiversity and affect the "carrying capacity" of forests. But pastoralists maintain that cattle do not damage the forests, and that conservation officials do not understand the sustainability of their practices.

The highest concentrations of poverty in India are in tribal-forest areas where many communities have been deprived of their customary resource rights. While communities are kept out of protected areas and marine parks, private ventures such as tourism and mining may be allowed in. Furthermore, the biggest grabber of tribal land has been the government itself, for example by declaring ancestral lands as forests or protected areas and making tribal people illegal encroachers. Lately there has been a much stronger push to take over common property resources, leading to deaths from famine in some protected areas and reserved forests. Commentators at the stakeholder workshop held to discuss this project noted that it is the poorest people who suffer most from such abuses, yet there is often nobody looking at the abuse of tribals at local level.

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (FRA for short) adopted in December 2006, brings new opportunities for securing the resource rights of tribal forest dwellers. Enacted in response to a prolonged struggle by an informal federation of tribal organisations, supported by the Ministry of Tribal Affairs, the act promotes coherence between forest conservation and tribal rights policies (see Box 15). This is a significant achievement, particularly given the opposition to the act from conservationists and the forest bureaucracy, who fear it will increase the threat to forests and wildlife.

Joint forest management (JFM)

India's 1988 National Forest Policy has the twin objectives of environmental conservation and meeting livelihoods of forest communities. It stresses the need for participatory mechanisms. It effectively shifts the role of the state from commercial logger to welfare provider (Mayers and Bass, 1999). The participatory approach is implemented through the 1990 Joint Forest Management (JFM) Programme, where forest management and protection is shared between the Forest Department and local village organisations. It entitles the village organisation to a share of forest benefits if they honour the responsibilities assigned to them (Sarin, 2005). JFM is now widely supported by the central and state governments. Twenty-seven states have adopted JFM orders, which are being implemented mainly on degraded forest land. JFM covers an area of 17.3 million hectares of forest, which is being managed by 85,000 village organisations (Khare, 2005).[39]

In a number of places, JFM has achieved forest regeneration. It has improved the quality of forest cover, particularly where local villagers have enjoyed improved resource use rights, and in some cases local people have successfully controlled illicit activities. It has also improved the relationship between forest dwellers and Forest Department (FD) staff (Sarin, 2005). In parts of West Bengal, studies have shown that JFM has led to an increased availability of fuelwood and a reduction in seasonal out-migration, suggesting that incomes from employment and from the sale of non-timber forest products have increased, particularly for the poor (Pattnaik and Dutta, 1997).

JFM has generally helped to open up India's forest policy in recent years. For example, the central government FD consults with different stakeholders, including selected NGOs and tribal leaders, through a JFM Network (although this is still far from inclusive). The Forest Department has established a JFM Monitoring Cell and is undertaking a study to assess JFM experience, indicating that there is willingness to learn and improve things. Some MoEF officials recognise that policy reforms can only succeed if there is an effective feedback loop for monitoring and evaluation, which includes independent assessments, and is institutionalised from national to local level (Bahuguna *et al.,* 2004).

However, while JFM has brought significant forest protection responsibilities, most state FDs are unwilling to devolve the authority to villagers to fulfil them. JFM has often been characterised by power imbalances and one-sided expectations of accountability, rather than genuine partnerships (Sarin, 2005). There has often been limited sharing of benefits from major produce, and in some cases the benefits promised to villagers were reduced after they initiated protection (eg. in Gujarat and Rajasthan; Sarin, 2005). In many cases, communities have stopped

39 See http://www.rightsandtrade.org/events/2005.9.27.Beijing/_docs/AKhare_CCAP_Presentation_92705.ppt#288,10,Slide%2010

protecting forests once the flow of funds has stopped. Much more needs to be done to create a greater sense of ownership among communities, ensure legally secure rights over the produce and enhance the institutional capacity of communities.

The lack of tenurial security or clear common property rights and insensitivity to the diverse livelihood functions of forest lands are undermining the effectiveness and sustainability of JFM approaches (Sarin, 2005). The FRA (see Box 15) now recognises community rights to protect, regenerate, conserve or manage customary community forest resources for sustainable use, which should help to alter the imbalance in power between communities and the forest department.

How can JFM be improved?

As explained by Sarin (2005), centralised forest administration designed for revenue generation cannot achieve the revised forest policy objectives of biodiversity conservation and social justice. Achieving these objectives requires the democratic decentralisation of forest governance, and in particular:

- Harmonising conservation laws with the constitutional provisions for protecting cultures, livelihood systems and resource rights of tribal and indigenous communities.
- Devolving responsibility and authority for conservation and sustainable use to local community institutions based on clear common property rights.
- Nurturing democratic local institutions, building on existing community initiatives, traditions and resource management systems.

Land ownership and tenurial issues have been identified as major constraints in some cases. Genuine participation of local people in the institutions created is needed to improve the sustainability of JFM and generate income after donor-driven activities end. Another recurring theme is the need to strengthen institutional capacity and change mindsets of the lower level forestry personnel. The need for greater use of local knowledge has also been emphasised (Bahuguna *et al*., 2004).

Some international development agencies are trying to address these issues through programmes for institutional reform of JFM in different states. The World Bank, which has played a significant role in promoting JFM, has requested participating state governments to adopt its 2002 rules for forest sector engagement,[40] which emphasise livelihoods/community development, working with village *panchayats*, and addressing tenure and rights. However, in Andhra Pradesh, the Bank-assisted JFM project (1994-2000) involved forced evictions of tribal people, who received little or no compensation. The Bank then launched a new "community-based forest management" project to reduce poverty and "empower" communities to take decisions. It also agreed to proper rehabilitation of the displaced families and to ensure rehabilitation of those accepting "voluntary" relocation in future. While stronger provisions against involuntary relocation were included in its revised resettlement plan, loopholes remain that could hinder proper compensation. Community participation, empowerment and benefits also remain weak. Furthermore, some local NGOs believe that the state government and FD are essentially using forest protection committees (VSS) to manipulate communities, with dubious promises of benefit-sharing, in order to take over their forest land for commercial use (Griffiths, 2005).

The success of JFM programmes depends on the long-term sustainability of the local VSS institutions. A firm commitment to the policy is needed from the forest department and the broader government, and the process of democratisation has yet to be strengthened (Sowmitri *et al*, pers comm. 2004).[41]

40 Author interview with World Bank, 2004.
41 VR Sowmitri, G Satya Srinivas and B. Venkat Reddy, cited in Carter and Gronow, 2005.

A particular lesson from JFM in India is that general policy guidance is not enough to effect change; practical details need to be carefully worked out and persistent efforts made on many fronts: legislative, planning procedures, job descriptions, finance etc. (Carter and Gronow, 2005).

7.6. Mainstreaming biodiversity in development policy and planning

In the 1970s and 1980s the government introduced several policy and legal measures for wildlife protection, pollution control etc. and set up a dedicated Ministry of the Environment. These steps were successful in distinctly slowing forest and wildlife destruction. But in 1991, new economic policies took India into the globalisation era and began to reverse the environmental gains made in the previous decade (Kothari, 2007a). The rapid economic growth and industrialisation (aimed at a 10% increase in GDP) has peaked in the last few years, and is putting huge pressure on biodiversity and rural livelihoods as forest land, farmland, wetlands, coasts etc. are taken over for commercial farming, plantations, industry, mining projects and so on (Kothari, 2006). Between 1980 and 2003, for instance, about 847,000 hectares of forests were "diverted" for over 10,000 projects (Kothari, 2006). As one person put it, "India is on a path to becoming a very rich country full of poor people" (IIED and Winrock India, 2006). Many economic subsidies harm the environment and biodiversity (eg. for irrigation, fertilisers, over-logging of forests, the paper industry, etc.). Even legislation on forest and wildlife conservation contains enough loopholes to allow large projects to slip through (Kothari, 2006).

Our consultations with different stakeholders (in 2004 and 2006) identified a very low level of integration of biodiversity in sectoral policy and planning in India.[42] Strengthening collaboration between the MoEF and other departments is critical, from central and state government to local *panchayat/gram sabha* level if biodiversity, forests and the environment are to be conserved. A number of mechanisms for promoting cross-sectoral policy co-ordination exist. However, in practice there is very little co-ordination between sectoral ministries and even between departments in the same ministry (eg. the MoEF). Policy dialogue is at best superficial; departments may exchange comments but are not obliged to take them on board. It is difficult for sectoral departments to work on biodiversity issues if this is not their area of focus or expertise. Competition for funds also makes co-ordination difficult; as one person commented, "you can tell the ministries to work together but it doesn't work". Another observed that the Government of India has "vertical loyalties and horizontal animosities". Nevertheless, the recent collaboration between the MoEF and the Ministry of Tribal Affairs on tribal forest rights has shown that it can be done.

The role of the National Planning Commission

The National Planning Commission is meant to have a role in co-ordinating sectoral plans and integrating environment into development plans. It oversees the preparation of Five Year Development Plans and Annual Plans of the central ministries and state governments, and the allocation of funding. It could in theory have a fair amount of clout over sectoral ministry plans, but in practice only makes minor modifications to them. This is partly because it has no budget of its own (and hence depends on ministry funding). It is difficult to change schemes during each five-year plan and even between successive five-year plans. Often ministries are reluctant to propose "off-beat" schemes for fear of losing out on the overall ministry allocation. Furthermore, environmental projects (e.g. integrated pest management (IPM) and integrated soil and water conservation) are only a minor part of some schemes, and minor parts don't get funded because of inertia in the planning system. Furthermore, people who raise environment or human rights issues in the Planning Commission are viewed as "anti-development" (IIED and Winrock India, 2006).

The Planning Commission responds mainly to industry interests, even though a number of advisory committees include selected NGO experts and academics. One key advisory committee includes representatives from industry, the World Bank and the Asia Development Bank, but no NGOs. Although some Planning Commission members are more pro-civil society and environment (eg. Abhijid Sen, Commission Member for Agriculture), they tend to have limited impact on policy and planning as the real power lies with the ministries.

42 This section draws mainly on stakeholder interviews in New Delhi in 2004, and a workshop on Biodiversity and Environmental Governance held in New Delhi in 2006.

Nevertheless, the Planning Commission remains a potentially important mechanism for enhancing policy co-ordination. There was some progress in integrating environment and biodiversity objectives in key sectors of the 9th Five Year Development Plan, although integration remained weak. The NBSAP process also sought to integrate biodiversity in sectoral plans of the 10th Five Year Plan. The MoEF requested the Planning Commission to ensure that NBSAP elements form part of the budgets presented by states. Making this a condition of funding could have gone a long way to integrating biodiversity concerns in state and district plans. The NBSAP also suggested the establishment of a working group to integrate biodiversity in the 10th Five Year Plan and monitor progress with implementing the plan's integrated approach. However, these proposals were not followed up due to lack of government support.

In the current process to develop the 11th Five Year Plan (2007-2012), environment is being addressed through the Standing Committee on Science, Technology and Environment and the Task Force on Governance and the Environment. Although the chapters of the 11th Five Year Plan are quite progressive, funding allocations are unlikely to change because the planning process is separate from the budget process.

The Approach Paper for the 11th Five Year Plan, recently released by the Planning Commission, stresses that the plan "must integrate development planning and environmental concerns", but the rest of the document seems to go in the opposite direction (Kothari, 2007b). Although the paper contains a couple of pages on "environmental sustainability", these deal mainly with technical and managerial tasks such as conserving wildlife, reducing pollution and solid waste, as opposed to how to steer the economy towards greater ecological sustainability. There is no mention of environment in the section on "Objectives and challenges" (Kothari, 2007b).

In fact, the Approach Paper recommends simpler clearance for industrial applications, including on environment, to reduce "delays", and warns of the dangers presented by environment protection to the "large increases in investment required for accelerated growth" of 8.5%. Similarly, it recommends the elimination of constraints to investment in mining, and favours contract farming, ignoring the inequitable deals for farmers and environmental degradation that it causes. The importance of organic or sustainable farming is not mentioned in its recommendations. The crisis faced by pastoral communities is recognised and linked to government policy which has resulted in blocking migratory routes and encroachment on pastures through development and conservation projects (although there is no recommendation for dealing with this). The paper also recognises the displacement of communities for development projects as a serious problem, but does not suggest that their consent should be required for approving the projects. Furthermore, the paper cites a National Common Minimum Programme statement that India can "absorb" three times the current FDI average of USD5.4 billion a year. (Kothari, 2007b).

The Task Force on Governance and Environment has proposed that the Planning Commission should be refocused into a Commission on Sustainable Development to co-ordinate all activities and policies and ensure they focus on sustainable development, and to act as a counterweight to the Ministry of Finance. The Planning Commission is in a good position for this, being the only government agency co-ordinating central and state governments. However, it would need more funds to cover the higher costs of environmentally friendly projects (around 3-5% of the budget) (Singh, 2006). This "Commission on Sustainable Development" could be a separate statutory or constitutional body so that it is not subject to the day-to-day pressures and whims of government and in order to maintain its independence. However, new bodies tend to just create jobs for retired or failed politicians who may know little about the subject, and committees for cross-sectoral co-ordination often don't work. Thus, rather than setting up a separate body, it may be better to focus on direct dialogue on integration with the different ministries and the cabinet (IIED and Winrock India, 2006).

The NBSAP process and sectoral integration

The national Steering Committee for the NBSAP included representatives of a number of different ministries (Health, Agriculture, Science and Technology, Social Justice and Empowerment, Ocean Development), the Planning Commission and NGOs. Members of the Technical and Policy Core Group (TPCG) conducted reviews of biodiversity integration into sectoral policies and programmes, while the Thematic Working Group on Laws, Policies, Institutions and Planning was also mandated to examine this issue. In addition, national environment policy was reviewed to assess coverage of biodiversity issues and identify gaps.

Box 16. Examples of integrated biodiversity, livelihoods and development initiatives

There are a growing number of initiatives which successfully incorporate biodiversity concerns in key development sectors:

In **agriculture**, many farmers are enhancing biodiversity while increasing productivity and employment potential, through organic farming systems that also enhance the availability of "wild" foods. In Andhra Pradesh, *dalit* women have demonstrated that biologically diverse farming, linked to a people-centred Public Distribution System, can considerably enhance the livelihoods, employment and nutrition of the poorest people.

In **health**, a number of projects are combining conservation of medicinal species with enhanced livelihood security of families using such species. The Foundation for Revitalisation of Local Health Traditions, for example, has established Medicinal Plant Conservation Areas in various parts of India, linked to the knowledge, traditions and livelihoods of village health practitioners. Several official agencies are also focusing on medicinal plant-based livelihoods and value-addition in the herbal drug sector.

In **water** development, experiments over a couple of decades in diverse agro-climatic conditions are showing that water harvesting with catchment protection can enhance the welfare of rural communities while regenerating biological diversity. In Alwar district of Rajasthan, for instance, hundreds of villages have revived their water sources through decentralised structures, regenerated catchment forests, and formed joint bodies for planning and implementation of land, water, forests and agriculture programmes.

In **forestry**, community and Joint Forest Management initiatives are combining livelihood development with forest conservation. Studies from the JFM network show that where the objectives shift from single species plantation timber production to non-timber forest produce (NTFP) from diverse forest, the livelihood benefits to local communities are greater. For this reason, the central government urged states to shift away from timber to NTFP and biodiversity-based JFM strategies.

In **tourism**, some projects are showing that healthy tourism can enhance biodiversity conservation and the livelihood security of local people. For instance in Sikkim, tourism managed by the residents of the Rathong Chu and Khangchendzonga regions has moved towards ecological sensitivity and providing sustained benefits to local people.

In **industry,** several experiments with small-scale units using natural dyes, medicinal plants and NTFPs are demonstrating that sustainable use is possible and desirable. In Karnataka, the Vivekananda Girijan Kalyana Kendra has worked with tribal co-operatives to sustainably harvest forest products and process them on site to make saleable products. Ecological monitoring has ensured some degree of sustainability, and is leading to sensitivity to biodiversity conservation objectives.

In **energy and infrastructure**, greater stress on environmental impact assessment, siting procedures, and public hearing processes, can lead the development of roads, railways, power stations etc. towards greater ecological sensitivity.

Source: Ministry of Environment and Forests and Kalpavriksh (2001). *Integrating Biodiversity into Sectoral Planning: A Note for Executing Agencies*. Prepared for the NBSAP, India.

The Guidelines for NBSAP executing agencies identified "assessment of all relevant sectoral plans and policies" as a key activity in the preparation of action plans. Each action plan was formulated by a nodal agency or working group, together with multi-stakeholder committees. State agencies were advised to involve all sectors, including State Planning Boards, solicit broad public inputs and build capacity to facilitate this. Nodal agencies were also advised on how to maximise the involvement of local people whose livelihoods depend on biodiversity.

A guidance note specifically on Integrating Biodiversity into Sectoral Planning was also prepared for Executing Agencies (Box 16). This stressed the need to assess sectoral plans and programmes systematically to make them more sensitive to biodiversity and livelihoods concerns. The note explained the critical role of biodiversity in maintaining ecological functions (eg. water, soil, crop pollination, food production), sustaining the livelihoods of several hundred million people (e.g. farmers, forest-dwellers, fisher-folk), providing healthcare and providing genetic resources for improving agriculture and fishery production. It stressed the particular importance of biodiversity for under-privileged people.

The note provided some estimates of the economic value of biodiversity:

> *Though no consolidated figures exist, conservative estimates put the global loss of forest, fisheries and agricultural productivity caused by biodiversity destruction at tens of billions of dollars. This does not even take into account the loss of critical ecosystem values (especially hydrological), and the social, cultural and non-quantifiable economic losses, which could be even greater than the quantified ones. For India, only piecemeal estimates are available: for instance, that forest degradation causes the loss of about Rs. 57 billion in wood produce alone* (Tata Energy Research Institute, 1998).

The note also included examples of biodiversity integration in key sectors which could be built on to integrate biodiversity into national and state level planning processes (see Box 16), along with key steps for identifying biodiversity integration needs and measures (see Box 17).

Box 17. Steps for identifying biodiversity integration needs and measures

The NBSAP's Guidance Note on Integrating Biodiversity into Sectoral Planning proposed that measures for inter-sectoral integration should be identified using the following steps:

1. Assessment of the current weaknesses in integrating biodiversity and related livelihoods concerns into each economic and social sector.

2. Identification of the major impacts of such weaknesses on biodiversity (and related livelihoods).

3. Identification of existing measures being taken to address these weaknesses.

4. Identification of actions required, including strengthening of existing measures, and integration in sectoral budgets.

The note also provided a checklist for preliminary assessment of biodiversity integration into sectoral policies and programmes. The checklist addresses three key questions:

1. What major changes in the *content* and the *process* of the sectoral policy and programmes are needed to make them more conducive to biodiversity concerns?

2. What is needed to make the policy facilitate the two core objectives of the NBSAP: ecological security of the country, and livelihood security of those most dependent on biological resources?

3. What major institutional structures and policy/legal changes would be needed to make this happen?

The *process* analysis aims to establish whether the process of formulating sectoral policies and programmes is consultative and inclusive of all relevant sectors of society, whether there are gaps that the NBSAP process can address, and whether policies and programmes have become more or less conducive to biodiversity issues over time.

Source: Ministry of Environment and Forests and Kalpavriksh (2001). *Integrating Biodiversity into Sectoral Planning: A Note for Executing Agencies*. Prepared for the NBSAP, India

In some cases, the process secured strong support from departments other than environment. Public hearings and meetings at sub-state sites involved a wide range of local actors. However, engaging all sections of society was a new concept for many of the executing agencies, and in some cases "participation" took the form of information gathering rather than engagement in developing options. The mechanisms for actively engaging a range of sectors were not always well understood. The TPCG held some orientation workshops to address such problems, including on gender sensitisation. Perhaps more orientation would have been beneficial, but there were severe constraints on time and resources.

The role of the MoEF and environmental regulations

Since the NBSAP process, there has been very little attempt by the MoEF to integrate biodiversity and environment issues into development policies. According to the former Joint Secretary of the MoEF and the CBD Focal Point, sectoral integration is not part of the MoEF's role, which is only to formulate policy, not to ensure that policy is implemented by other departments, industry etc. (D.D. Verma, personal communication, 2004).

The last three to four years have instead seen a downgrading of environmental and social safeguards in order to facilitate economic growth and foreign investment, and even the MoEF seems to have become "pro-industry" (IIED and Winrock India, 2006). Having been credited with introducing a series of progressive environmental laws in the 1970s and 1980s, the MoEF "has been transformed into a rubber stamp for unsustainable development processes" (Kothari, 2006). It is said to be clearing the way for projects in the most ecologically and culturally sensitive areas, including biodiversity hotspots such as the Western Ghats, Noth-Eastern Himalayas and central India (Kothari, 2006).

The surge in interest from foreign investors has brought pressure for legal reform to reduce bureaucratic red tape, leading to dilution of environmental and social clearance procedures to make it easier for industry to get licenses. A key objective of the MoEF's 2006 National Environment Policy (NEP) is the integration of the environment into economic and social development, and efficiency into environmental resource use. However, the NEP also recommends changes in EIA procedures to reduce delays in clearing economic investments. The existing EIA and Coastal Regulation Zone notifications are also being replaced by much weaker regulations (Kothari, 2006). Essentially, the assessment and clearance process for industry has been fast-tracked and avenues for public participation have been narrowed. While central and state governments and industry were consulted in the development of these policies, there was very little input from civil society.

As a result of these reforms, only certain projects need environmental clearance at state level, and state Impact Assessment Authorities now have the power to completely decide whether some projects under their jurisdiction need an EIA. Construction/real estate projects are exempt from EIAs and public hearings, and there is no government responsibility for monitoring compliance. The decentralisation of responsibility for EIA to the state level has not been accompanied by capacity building, and some people feel that EIA should remain centralised. Final EIA reports do not need to be shared at all, and concerns raised may be brushed aside on the grounds that they are only draft EIA reports. There is a lack of information and data for carrying out EIAs, yet scientists are often denied access to wildlife reserves. In some cases EIA reports have even plagiarised information from other EIAs.[43]

It has been proposed that many institutions set up to involve citizens in ensuring sustainable development, such as Ecologically Sensitive Area committees, should be dismantled, while many so-called "expert committees" have been shown to be politically selected. For example, an analysis in 2004 showed that there were only two wildlife experts and one NGO amongst 64 members of 6 expert committees (Kalpavriksh, 2004). All of this, however, needs to be seen in the context of the MoEF itself being sidelined by a government intent on achieving an annual GDP growth rate of 10% (Kothari, 2007c).

The relationship between the MoEF and civil society has become very polarised in recent years, particularly around the NBSAP issue, but also on environmental issues more generally. Some NGOs are fed up at the lack of response to various letters, petitions, campaigns, etc. and have therefore resorted to being more confrontational.

43 Workshop on Biodiversity and Environment Governance, 2006.

In relation to these issues, the stakeholder workshop for this project (IIED and Winrock India, 2006) made the following recommendations:

- Integration of biodiversity should be made an objective of all policy and planning, and the MoEF should play a proactive role in this. It could produce a paper every year on the environmental and biodiversity impact of policies and programmes of other ministries, in collaboration with them. There should also be a three-day training on the environment for every new Joint Secretary.

- The current EIA Notification should be revised after full and widespread public consultation, to include tighter regulations and adequate public participation. More work is needed to understand the balance required between centralised and decentralised powers for EIAs.

- Rather than diluting the Coastal Regulation Zone Notification through the proposed Coastal Management Zone regime, the existing CRZ notification should be strengthened to protect coastal ecosystems and traditional fisherfolk.

- Efforts are needed to establish a more constructive dialogue between civil society and the MoEF in a non-threatening environment (for example, using a neutral NGO facilitator, and less critical language).

Environment issues in Special Economic Zones

According to the *Special Economic Zones Act (2005)* and Rules (2006), SEZs are technically a foreign "enclave" designed to boost exports and provide a "hassle-free" environment. This means exemption from the labour and environment regulations that normally apply in India. With various tax exemptions and subsidies, SEZs are spreading quickly. As of October 2006, 237 had been fully approved, and a further 166 had been approved in principle. Over 50% are business and IT centres and the rest include manufacturing and pharmaceutical/biotechnology, engineering, electronics and others.

The SEZ Act is silent on land acquisition procedures and unclear about environmental clearance requirements. An EIA is required for SEZs, but the process does not require a public hearing or disclosure of the proposed use of the SEZ. Furthermore, the guidelines for the notification of an SEZ do not include environmental concerns. There is no mention of coastal regulations in the SEZ Act and Rules, while CRZ notifications make space for SEZs with almost no conditions or regulations. Worse still, the SEZ law will over-ride all other laws in the country; any grievances related to it will have to be addressed by special SEZ courts.

Box 18. Impacts of an SEZ in the Mundra Coast, Gujarat

In Gujarat, a Special Economic Zone of 3,000 ha has been approved on the Mundra coast, one of the state's few green zones, rich in marine life and biodiversity. Another 10,000 ha SEZ is planned. The area supports a fishing community which has low social status and is marginalised from the village and from local governance and public services such as education and health. It also suffers from heavy debt burdens and lacks secure land rights and hence livelihoods. The SEZ has blocked roads for fishermen, caused a 50% decrease in mangroves and reduced water availability. Fish workers had to leave their settlements in 1999, and they fear that this will happen again.

Source: Presentation by Bharat Patel, *Workshop on Biodiversity and Environmental Governance*, Delhi, December 2006

The implications are the large-scale acquisition of land and common property resources (125,000 hectares will be acquired for 400 projects) (Asher, 2006), loss of livelihoods and displacement of the poorest people (eg. farmers, fish workers and agricultural labourers). Environmental costs will include loss of forests and other common lands; large scale exploitation of water resources; the spread of corporate farming and loss of biodiversity (see Box 18). There are reports in the Indian media almost daily about struggles with local communities, environmental damage,

protests, violence and sometimes deaths, as a result of SEZs. Opposition has been particularly strong in certain states, such as West Bengal. Compensation is offered in some cases, but this does not make up for the permanent loss of land and livelihoods. Both economists and ecologists have criticised the SEZ law and predicted a loss of revenues and jobs (eg. because more permanent jobs in agriculture will be lost than new jobs created).

Civil society organisations have called for the SEZ Act to be repealed, or considerably revised with local peoples' active involvement, in order to provide real avenues for affected local people to give or withhold their consent (IIED and Winrock India, 2006). In January 2007, faced with growing opposition, the government announced it would put on hold further approvals of Special Economic Zones and review the SEZ policy, recognising the danger of their proliferation. However, without real changes in economic policy, the increasing displacement of communities, environmental damage and inequality is likely to continue, along with a growth in associated social unrest, mass protests and violence, as has happened in China (Kothari, 2007c).

7.7. Integrating biodiversity into agriculture and rural development policy

India's agriculture policy pays little attention to biodiversity and related livelihoods. The draft Agriculture Policy of 2001 began to recognise the need for sustainability but still emphasises contradictory approaches (MoEF and Kalpavriksh, 2001). The Green Revolution approach, which began in the 1960s and centres on increasing productivity and GDP, is strongly believed to be "universally good". This model promotes varieties of seed that respond to high use of fertilisers and pesticides, and has resulted in widespread mono-cropping and the "chemicalisation" of agriculture, destroying much of the agricultural biodiversity on irrigated farmland (Satheesh, 1999). Financial incentives and agriculture schemes are almost completely oriented towards such high-input farming (eg. subsidies are available for chemical fertilisers and pesticides). However, Uttaranchal State has become organic and organic farming is beginning to attract some financial incentives in a few other states.

The Green Revolution model has increased productivity and created pockets of affluence in areas with good soils, water for irrigation at low cost and state subsidies for chemical inputs. But these benefits have reached only the upper strata of rural society and widened the gap between rich and poor (Satheesh, 1999). The Green Revolution has also caused deprivation to many small and marginal farmers, and is continuing to marginalise farming communities and deplete the natural resource base and agro-biodiversity.

The fear is that the Green Revolution will spread to large pockets of rainfed dryland areas (nearly 65% of farmland), which still sustain biodiversity and the farmers' knowledge associated with it. Policymakers are considering pushing through a "second Green Revolution" in dryland areas in order to increase yields, while also advocating contract farming and the consolidation of farm holdings, which would displace large numbers of small farmers from agriculture. Yet there is ample evidence that hybrids and high yielding varieties (HYVs) of crops brought by the Green Revolution have not yielded significantly more per unit area, particularly when grown by small and marginal farmers under their own management systems (Satheesh, 1999).

Intensive farming and HYVs (eg. cotton) in semi-arid areas are already putting huge strain on water resources. Small farmers get caught in a cycle of debt due to ever increasing needs for external inputs such as fertilisers, pesticides, seeds and water. This has led to farmer suicides in cotton growing states like Andhra Pradesh and a widely recognised agrarian crisis. The crisis is affecting around 550 million farming communities, and is "frightening the politicians out of their wits" (P.V. Satheesh, pers. comm., 2004). It has brought some realisation that the GR model is not necessarily the best approach and has helped to open up debate on the issue with civil society. However, more needs to be done to raise awareness that the agrarian crisis is due to environmental problems such as soil erosion, drought etc. (IIED and Winrock India, 2006).

The Planning Commission gives priority to funding commercial schemes and agri-business and very little attention is paid to biodiversity and small farmers. However, there are some small schemes with potential for supporting agro-biodiversity and small farmers, such as bio-fertiliser production, and processing and marketing facilities for

the poor (Khadi and Village Industries Commission).[44] There is also a scheme to compensate farmers for conserving landraces.[45] Emphasis on integration of livestock into agriculture schemes is bringing a more farmer-based perspective and a focus on common property resources (Abhijid Sen, pers. comm., 2004).

Although the Ministry of Agriculture is a member of the National Biodiversity Authority, this has not improved policy co-ordination: biodiversity and wildlife are not addressed in agriculture policy (and *vice versa*). Agriculture policy is even more top-down and closed than conservation policy, with industry and richer farmers having great influence. The Ministry of Agriculture mainly listens to industry and scientists (industry bodies, agri-business and agriculture research institutes) and is not very open to NGO views. The agriculture establishment in India has been strongly influenced by US/European high-input models since the 1970s. Foreign agribusiness has an increasingly strong influence on policy, eg. through consulting firms, private funding for research, and donor interventions (see below). Agriculture officials become part of an international circuit of experts, going to conferences in the US and Europe, and lose touch with the realities of rural life.

A number of grassroots groups across India are working to promote biodiversity-based agriculture as a means to strengthen farmers' livelihoods, agro-biodiversity and self-governance. Some have helped to raise awareness in policy circles, particularly those that have been active for many years (eg. Beej Bachao Andolan and the Deccan Development Society—see case study below). Overall, however, there is less NGO activity on sustainable agriculture issues at policy level than for wildlife conservation, partly because there is less donor interest in agro-biodiversity. Some NGOs may have been co-opted by industry, either through funding or participation in advisory committees. Academics are also less critical than they used to be because they receive more funding for biotechnology. Hence there is no longer the opposition there was ten years ago: "civil society has gone quiet".[46]

Local case study: DDS and community agro-biodiversity management in Andhra Pradesh

The Deccan Development Society (DDS) is a grassroots organisation working with 5,000 women farmers (mainly *Dalits* or "untouchables") in the semi-arid Medak District of Andhra Pradesh, Southern India. It aims to strengthen and consolidate local womens' organisations (*Sanghams*), and reverse the process of degradation of livelihoods and the environment. It is facilitating activities like collective land leasing, community grain and gene funds, permaculture and community biodiversity registers, which are giving women a new-found profile in the community and larger polity. DDS seeks to enhance agricultural biodiversity primarily to improve livelihoods, rather than for environmental ends. Enhancing agro-biodiversity provides a means to improve nutrition and food security, stop land going fallow, bring women's knowledge back into agriculture, and counter the central focus of biotechnology in agriculture policies and research institutes. Agro-biodiversity is closely inter-linked with soils, crops and marginal farmers—all of which are continually subject to marginalisation.

Policies on agriculture, biotechnology, seed and farmers' rights, and several kinds of centralised and decentralised systems all affect DDS's work. The government's Public Distribution System provides wheat and rice seeds, rather than the dryland crops (millet, sorghum etc.) needed by the 70% of India which practices dryland agriculture. Dryland farmers need a wide variety of crops to cope with rainfall fluctuations. Yet no credit is available for many dryland food crops and credit systems impose restrictive conditions. The agrarian crisis led the government to provide a range of dryland crops via the PDS, but banks will not provide credit to support the production of these crops as they feel it is too difficult to assess returns from multiple crops. In addition, markets have marginalised dryland crops such as millets because richer farmers growing rice and wheat have influenced both the PDS (which is a huge market) and consumer preference. As a result of the lack of market for these dryland crops, farmers continue to abandon their land, leaving some 110 million hectares fallow.

DDS is promoting a different type of PDS which is under local control and enhances biodiversity, by getting village fallows back into production and planting traditional dryland crops. This has improved food security, ensured that the poorest families receive enough food to avoid going hungry. In 2003, 51 villages had adopted the approach

44 National Biodiversity Strategy and Action Plan, India, Chapter 6. Technical Report by the NBSAP Technical and Policy Core Group (2003).
45 V.L Chopra, Planning Commission Member for Environment, personal communication, 2004.
46 Quote from 2004 stakeholder workshop.

and by 2005 it had spread to 77 villages and over 2,000 hectares of fallow land, and was feeding 50,000 poor people very cheaply. The programme has also started to have policy impact. NIRD (the National Institute for Rural Development) evaluated the programme and recommended the use of fallows for traditional varieties, while the NBSAP recommended distribution of traditional varieties through the PDS.

The first signs of modern agriculture (ie. mono-cropping and agro-chemicals) are appearing in a small part of the dryland area, where farmers have shifted to cash crops like cotton and sugar cane, placing enormous strain on water resources. Over 400 farmers committed suicide in one district of Andhra Pradesh three or four years ago, because they were unable to keep up with the expensive inputs needed.

Genetically modified (GM) crops also pose a significant threat to agro-biodiversity, sustainable agriculture and livelihoods in Andhra Pradesh. Cultivation of Bt cotton was permitted in 2002, but a recent three-year study found that profits of small and marginal farmers are lower than those cultivating non-Bt cotton (Qayum and Sakkahari, undated). There is much more credit and support linked to GM and intensive agriculture, but once farmers adopt this approach, it is very difficult to revert back. Farmers and research institutes get caught in a trap: intensification is promoted, it doesn't work, so further intensification is pursued. Biofuel production is another increasing threat to local agricultural systems, with a number of Indian multinationals beginning to cultivate them.

There is an almost unchallenged assumption that scientific knowledge is superior and farmers' knowledge is worthless. This results in an externally-driven, technology intensive agriculture policy, which erodes farmers' knowledge, control over food systems and biodiversity. The government, the scientific establishment and the education system are all undermining farmers' confidence in their knowledge. Farmers have become like ventriloquists articulating other people's analysis rather than their own. Hence there is a need to build farmers' confidence in their knowledge and demonstrate its importance and validity to others.

Critical funding is needed for action research to:

1. Help farmers regain their voice by supporting the revitalisation of traditional crop production and building their capacity to analyse what it has done for them. This will help show that ecological agriculture is more economically viable for farmers. This is what DDS is doing, but on a small scale (with about 1,000 women).

2. Share the findings of farmers' own analysis with others (eg. research institutes, government agencies), in order to demonstrate the value of farmers' knowledge, transfer knowledge from farmers to others, and build the capacity of farmers to influence policy.

3. Enlarge the circle of people that DDS is working with and build up a larger coalition of local people.[47]

Integrating biodiversity into rural development policy

Biodiversity issues are not integrated into rural development policies or poverty reduction strategy papers (PRSPs) at either central or state level. Rural development policy in India focuses on poverty alleviation through employment, infrastructure and "area development", including watersheds. Natural resources, wildlife and agro-biodiversity, and their role in poverty reduction, are hardly addressed, except as part of watershed programmes. An analysis in 2002 indicated that central and state governments spend about Rs 400,000 million annually on poverty alleviation programmes which do not ensure ecological security (MoEF, 2003).

Even in wildlife rich areas, the Ministry of Rural Development does not take wildlife policies into account, to the extent that it often has completely conflicting schemes to those of the MoEF Wildlife Department. For example, the Wildlife Department has banned rearing of goats and sheep in wildlife areas, while the rural development department often gives loans to buy goats and sheep in the areas where they are banned.

47 For more information about the work of DDS, see http://www.ddsindia.com.

7.8. Integrating biodiversity into state and district planning

The 73rd and 74th amendments to the Indian Constitution in the mid-1990s put decentralised planning on a very firm footing. Each state must to set up a Development Planning Committee, which is supposed to maintain a database of natural resources to inform planning. Although many states have set up State Biodiversity Boards to implement the Biodiversity Act, these tend not to have a say when economic plans and SEZs are formulated, since they have limited funding and staff and lack the mandate to proactively advise state governments. However, in Madhya Pradesh the State Biodiversity Board commented on the agriculture policy, which was to have a big impact on biodiversity (Box 19).

Box 19. Integrating biodiversity into state development planning in Madhya Pradesh

Madhya Pradesh is one of the few states to have attempted to integrate biodiversity into state development planning, largely due to the initiative of a state official who was actively involved in the NBSAP process. Development projects were screened and roughly ranked according to their likely impact on biodiversity. The idea was to strengthen the schemes with positive impact and decrease support to those with negative impact. When a new Vice Chair was appointed, he took up the approach and piloted it in six districts. But he passed away and without clear political support, the initiative stalled.

The Madhya Pradesh SBB has also established eco-regional and multi-stakeholder district support groups (involving NGOs, etc.) and initiated processes for integrating biodiversity into watershed schemes and plans. The eco-regional and district support groups inform integration at local level, where it can really take place. However, immense capacity-building is needed for district planning teams, and the SBBs should help with this.

It is easier to promote sectoral co-ordination at local level since peoples' livelihoods are inherently cross-cutting. It would therefore make sense for village councils (or *panchayats*), the lowest official administrative unit, to co-ordinate the interventions of various ministries. However, they usually lack the power to do so. There is a great deal of resistance to devolving power or funds to *panchayats* because most states have not helped build *panchayat* institutions. In addition, *panchayats* are often affected by party politics and corruption and hence may not be very responsive to local peoples' needs. The new Biodiversity Management Committees (under the Biodiversity Act) could play an important role in promoting biodiversity integration and management locally, but also have very limited powers and are largely being set up as part of existing *panchayat* institutions. However, where NGOs are helping to strengthen *panchayats*, BMCs could become effective local institutions for biodiversity management.

7.9. The role of donors

In addition to supporting biodiversity related projects (eg. wildlife conservation, joint forest management, NRM etc.), a few donors have tried to work with the MoEF to encourage mainstreaming of environment and biodiversity in sectoral ministries. The UK Department for International Development (DFID) undertook a three-year scoping study on environment-poverty links which helped open up a dialogue on the issue. But in the last few years, environmental issues have moved down the political agenda as the Government of India has strongly prioritised economic growth, and donors have thus become less assertive on environmental issues. Furthermore, since the NBSAP has become a politically sensitive issue, many donors are reluctant to get involved in initiatives relating to the NBSAP or biodiversity in general.

Donor interventions outside the biodiversity "sectors"—eg. support for macro-economic reforms, growth-promoting policies, development projects, etc.—have largely had negative impacts on biodiversity. Major development projects (eg. infrastructure, hydro-electricity, mining), carried out with donor loans or grants, or as part of donor-supported reform programmes, often have significant environmental and social impacts. In Orissa, for example, many tribal people lost their lives in their struggle to prevent their lands being taken over by the Sterlite Mining

Company. In this context, some of the phrases in the World Bank's 2004 press release on its Orissa Socio-Economic Development Credit/Loan, take on ominous meanings: "implementation of the first set of administrative measures to improve the business environment" and "growth-enabling reforms". Furthermore, it appears that a review of environmental regulations ("environmental capacity-building") funded by the World Bank led to the downgrading of EIA and clearance procedures described in Section 7.6 above (Kothari, 2006).

As mentioned above, the influence of international donors on government policy in India has decreased in recent years as many donors have been asked to withdraw their support. Nevertheless, donors can still have significant policy influence even if they no longer fund programmes or have direct interaction with policy. For instance, donors still play a significant role in promoting intensive agriculture in India through support for the Indian Council for Agricultural Research and for training abroad. Some have begun to focus on organic agriculture for export, but their main thrust is to promote intensive farming and respond to industry interests in the US and EU, often at the expense of the livelihoods of small farmers, despite their rhetoric on poverty reduction.

Furthermore, organic agriculture for export does not necessarily support biodiversity. Many of the principles of organic farming (diversity of crops and cultural practices, improved self-reliance of farmers and better nutrition) are not applied in the organic certification criteria of importing countries. Furthermore, the certification systems are expensive and bind the farmer to considerable paperwork. As a result, the Ministry of Agriculture is working with the FAO to develop a Participatory Guarantee System which actively engages local farmers in the certification system (Rastogi, 2006).

7.10. Getting biodiversity onto the political agenda

The task of mainstreaming biodiversity is very difficult when biodiversity and environmental issues are low on the political agenda, and biodiversity is seen as a wildlife conservation issue, rather than being central to livelihoods and social justice. The problem with "biodiversity" is that it sounds very scientific. Rather than being promoted as an environmental concern, biodiversity should be seen as a "people's" concern, ie. as a means to achieve a better quality of life, improve nutrition, food security, health, etc.

Civil society organisations need to become more politically active, and raise the awareness of Members of Parliament and the profile of environment and biodiversity concerns as social justice issues. The Tribal Forest Rights Bill struck a chord among the political class, why not the NBSAP? Other lobbies, eg. the *Dalit* lobby, are also more powerful than the environment lobby. The biodiversity community needs to adopt the language of the social justice movements. It has not been very successful in showing how biodiversity conservation and poverty alleviation are directly linked. To get buy-in from social justice movements and political leaders, it is crucial to highlight this link repeatedly.

Furthermore, as noted earlier, getting onto the agenda of politicians and political leaders and cultivating their support was not a key thrust of the NBSAP strategy. By contrast, the Campaign for Survival and Dignity was successful in getting a number of politicians behind the Tribal Forest Rights Bill (Box 15). Much effort was made to engage politicians from each party, and factual data were used to show how many people are affected etc., data which many MPs are now quoting. Hard figures are needed to counter arguments that, for example, 10,000 jobs will be created through industrial development projects, and to show how many more permanent jobs will be lost (eg. in agriculture) by pursuing such a path. Supporting farmers' agrobiodiversity, rather than displacing farmers, would create millions of permanent jobs; but only the jobs created through industrial development get publicised.

7.11. Policymaking and implementation processes

Participatory democracy and consensus is the basis for political support in India, yet governance is getting worse and many of India's problems are due to this. Policymaking tends to be centralised and top-down, responding mostly to the concerns of elites and industry. Industry has become increasingly influential in the last few years as the government has strongly pursued economic growth, trade and foreign investment agendas.

Public consultation when developing policy and law tends to be limited, particularly given the size of the country, the need for translation into local languages etc. Some policies have had longer and more pro-active consultations, but there is no guarantee that comments will be taken on board. The government sees policymaking and deciding whether to include wider views as its responsibility alone. When consultative meetings are held, only selected NGOs tend to be invited, which may exclude those that are most knowledgeable about an issue (as was the case with the new National Environment Policy). There is very little consultation with CBOs and local communities in policymaking because it is often regarded as too cumbersome.

NGOs on various government advisory committees are selected by the government which means that they may be ex-officials or consultants working closely with the government; those which do not support the government's position are often excluded. The rapid growth in industry activity since the 1990s has brought pressure from NGOs to ensure adequate environmental and social safeguards. As a result, industry complained and the government removed many NGOs from consultative committees.

In most cases, CBOs and NGOs have two options when they want to make a point or comment on any policy: (1) to lobby via informal channels and personal contacts; or (2) to organise mass movements, rallies, etc. There is no formal forum to which all NGOs can bring issues; nor is there scope for policy to be brought back to the public before being finalised. Even policy decisions which will affect millions of lives are taken without the opportunity for the public to comment.

Even within the government there is often a total lack of transparency and accountability; MPs and high level government officers tend to think that they know best, and fail to consult others, even the parliamentary standing committees. This lack of accountability and transparency needs to be addressed at all levels in order to reduce corruption and serve the needs of the people. MPs are accountable to some extent because they are elected, whereas the bureaucracy is not. However, people's participation may be more important in some sectors, such as forest and wildlife management than others, such as control of air and water pollution, where stronger law enforcement is required (IIED and Winrock India, 2006).

When new policies and laws are introduced, despite good intentions, they are often not implemented because institutional systems and incentives don't change. As one person commented, "the government is like an elephant" – ie. very slow to change direction. Policies are often developed without sufficient attention to local implementation realities and mechanisms, and most actually undermine local peoples' role in implementation. The adoption of more decentralised and participatory approaches in NRM implies a willingness to share decision-making power with local people and an ability to respond to local needs. But the hierarchical structure of government means it is difficult for those on the ground to make demands of those higher up.

Many Indian laws are contradictory; although this reflects a responsiveness to diverse interests, it also creates confusion and inertia. Laws are variously interpreted to suit particular interests, even by different districts in the same state, or not applied at all if they go against the interests of the powerful. As noted above, laws on the rights of tribal people to natural resources, self-governance and land are widely ignored.

In general, there seems to be very limited feedback from implementation experience. Low priority is given to assessing the impacts of policy and investments, exploring alternatives or responding to different needs in society. For example, central and state schemes for agriculture are implemented with limited evaluation of their impacts, including on small farmers' livelihoods, agro-biodiversity and related traditional knowledge.[48] Although systems for monitoring and evaluation are in place in the ministries and the Planning Commission and many schemes in the planning process are evaluated (particularly if they are funded by donors), the evaluations are not independent and there is a reluctance to highlight weaknesses and point the finger. Furthermore, government systems for monitoring and evaluation are based on quantitative data only. Weak institutional learning systems only serve to reinforce the *status quo*.

48 National Biodiversity Strategy and Action Plan, India, Chapter 6.

Policymaking tends to be informed by a narrow information base that reinforces existing thinking. For example, much information is available on the adverse impacts of intensive farming, but is not used. Furthermore, there is no land-use planning system which could channel information to help minimise impacts of development on natural resources, biodiversity and livelihoods through spatial planning.

Policymaking should be about supporting the needs of society and managing trade-offs between different interests. How do we reconcile different interests at local level? The tension between environment and development is really a three-way tension between global or off-site environmental concerns (eg. biodiversity conservation, climate change), local livelihoods and economic development (which also generates benefits off-site due to the structure of the economy). Typical situations are:

1. In high biodiversity areas, local livelihoods are endangered by conservation interests.

2. In all landscapes, local livelihoods and biodiversity are endangered by industrialisation (eg. SEZs).

3. Local livelihoods often "degrade" the resources on which they depend because of poorly-defined rights.

Rights-based governance implies first identifying pre-existing rights of resource use, followed by reconciliation and re-definition. *Gram sabha* (ie. village level) consent should be required for moving towards either conservation or industrial use. When local rights are curtailed, consent must be tied to compensation through a statutory mechanism (Lele, 2006).

In addition, *panchayats* (at supra-village level) need to be made more accountable to local people. They receive a small percentage of revenue from district/state levels and are essentially contractors (eg. for construction projects), accountable to higher levels. If they had responsibility for collecting local taxes such as land revenue from local people, and paid a percentage to higher level institutions, they would be much more accountable to local people, who would ask questions about how their money is spent. *Panchayats* should also be made performance-oriented and devolution should be linked to performance (IIED and Winrock India, 2006).

7.12. Strategies for influencing policy

Influencing policy requires a political approach: "policy is not based on logic but on politics". Understanding political processes and motivations is key, in order to "see where there is least resistance to pierce the armour".[49] But a technical approach is also needed, as the technical capacity of policymakers is growing. Thus, in order to gain political support there is a need to:

- Build strong evidence to counter dominant paradigms that hold power.

- Conduct analytical campaigns based on hard data/balance sheets (eg. on impacts of the first Green Revolution).

- Test alternative approaches and show they work.

Civil society should act more as a "knowledge community", helping to provide good data to move things forward. At the same time, it needs to engage more with diverse stakeholders, such as politicians, associations, labour unions and different ministries. For example, if the agriculture ministry is not interested in addressing biodiversity, there may be some interest in the health ministry.

Taking policymakers to rural areas can be useful to broaden their perspectives and promote appreciation of alternative approaches. Agriculture officials, for example, often become involved in the international "circuit" (seminars, conferences etc.) and lose touch with local realities. Getting biodiversity and related livelihoods onto training courses and the school curriculum is also critical, along with much greater engagement with the media.

49 Quotes from 2004 stakeholder workshop.

Policy change usually happens if a lot of people start demanding it and a few people at high level think it's a good idea. For example, JFM, which was a fairly radical shift in policy, was introduced because of pressure for reform from grassroots movements combined with the idea being proposed at high level within the MoEF. Similarly, the Forest Tribal Rights Act came about as a result of pressure from within government (initially, from the Prime Minister's Office and the National Advisory Council), as well as outside government, from the Campaign for Survival and Dignity. A combination of high level and local approaches is likely to be most effective for promoting institutional change.

India has a strong and active civil society, which despite being rather unco-ordinated, has made considerable gains since the 1970s (Khare *et al*., 2000). Recently, however, the government has become less responsive to civil society campaigns and people's movements. In the current era of globalisation, those seeking to influence policy need to get India's powerful elites and growing middle classes on board—the larger farmers, industry, etc.—since they have control of political decision-making structures, at central and local level.

New governments, institutional reforms and new generations of bureaucrats can bring opportunities for change. The recent appointment of a new Minister and Secretary for Environment and Forests, and the recent adoption of the Tribal Forest Rights Act, may open a small window for positive change. Other opportunities include RITA (the Right to Information Act) and the National Human Rights Commission (NHRC), which is both a government agency and an activist, using the law, the constitution and the courts to ensure existing laws are enforced.

The issue of SEZs and downgrading environmental regulations is being addressed by the Campaign for Environmental Justice. However, with SEZs there seems to be little space for change and, faced with limited resources, some NGOs are wondering whether it is worth trying to create spaces and make use of them, or whether they should resort to organising country-wide protests or even a "revolution". Frustrated with the lack of attention to environment and livelihoods issues, they feel that efforts are needed to empower communities and shift power away from the government.

7.13. Suggestions for action-research

The India case study has highlighted the need to combine research with strategies to influence policy and empower marginalised communities who depend on biodiversity. The following suggestions for more in-depth action-research on biodiversity governance were made:

1. *Conduct participatory analysis of the impacts of governance on community conservation*: case studies could examine the impacts of "external" policies, institutions and processes (including economic policies and political processes), on the conservation and livelihood impacts of community conservation initiatives. They could also examine the kinds of local and higher level institutions needed to maximise positive impacts for biodiversity and livelihoods. The aim would be to promote more supportive governance systems and facilitate the scaling-up of community biodiversity initiatives. The studies could involve a three to five-year process of participatory research with local communities, which would also serve to build community capacity for policy analysis. The focus could be on initiatives which have been underway for some time, where communities are more aware of policy constraints and are ready to start tackling them.

   The results of the case studies could feed into parallel learning groups at state level to examine the lessons from the field sites and implications for policy and law. The learning groups could provide a multi-stakeholder forum for discussing and promoting uptake/ownership of the results, involving local communities, CBOs, NGOs, academics and government agencies. They could also conduct further policy analysis to address the issues emerging from the community level analysis and seek to influence policy (eg. by feeding the results into a senior ministerial group).

2. *Conduct state-level case studies of governance processes:* case studies of biodiversity governance at state level could explore how different actors influence policy and how less powerful actors have managed to have an influence. As multiple actors influence policy, it may be easier to explore these influences at state level than

at national level. In Madhya Pradesh, for example, biodiversity policy was developed with a number of small and marginal farmers. The analysis would complement the community-level governance case studies, and the results could feed into the same learning groups on biodiversity governance at state level.

3. *Focus on policy implementation:* states where BSAPs have been adopted and are being implemented (eg. Madhya Pradesh) could be analysed to explore whether the priorities of a particular policy are being implemented and how they can be translated into practice. The approach could also entail participatory analysis with communities on the impacts of selected biodiversity initiatives and related governance issues. The results could then be fed into a parallel multi-stakeholder learning group at state level.

4. *Build evidence to counter dominant thinking*. Shifting the focus of policy requires hard evidence to make the case for alternative approaches. Data gathering and analysis could be done to counter dominant arguments on, for example:

    - The economic benefits of traditional biodiversity-rich farming systems for poor farmers, as compared to biotechnology-driven high-input agriculture.

    - The impacts of community-based conservation on biodiversity and livelihoods, as compared to protectionist approaches.

    - The economic costs and benefits of SEZs, at both local and national levels, taking into account both job losses and job creation.

As much research has already been done on biodiversity governance in India, the first step would be to review and synthesise existing research. This would help to define the focus, along with a review of policy processes, institutions and actors (ie. a more in-depth "situation analysis") to identify the greatest opportunities for influence.

CHAPTER 8. TANZANIA

Krystyna Swiderska and Faustin Maganga

Research background

The Tanzania case study is based on:

- Interviews held with a range of stakeholders in Dar es Salaam in March 2005.
- A meeting to review the interview findings.
- Relevant literature, especially aprevious study on civil society influence on biodiversity and poverty reduction policy conducted by IIED and the Institute for Resource Assessment of the University of Dar es Salaam in March 2003 (Swiderska *et al*., 2003).

Tanzania has one of the highest levels of plant diversity in Africa (11,000 species), particularly in woodland, montane and coastal forests; and is also rich in high value mammal species (Mwalyosi and Sosovele, 2001). With at least 310 mammal species, the country has Africa's fourth largest number of mammals; comes third for birds with some 960 species; and fourth for amphibian and reptile species. It also has one of the world's 20 biodiversity hotspots: the Eastern Arc Mountains. This diversity is supported by a range of habitats, from coral gardens in the Indian Ocean to coastal mangrove forests, various types of wetlands, flood plains, tropical forests, grass plains, savannah woodlands, lakes and rivers (Bisanda, 2003).

With 75% of people living in rural areas, the lives of the majority of Tanzanians rely heavily on the use and conservation of natural resources (Box 20). Wild plants, animals and fisheries provide a critical source of food for most people, forests provide fuel and perform water catchment services and land is fundamental for farming and livestock husbandry. Beyond these local values, wildlife, coral reefs and natural landscapes drive a tourism industry that has become a key component of Tanzania's macroeconomic prosperity (Nelson, 2004).

8.1. Wildlife conservation and national parks

In Tanzania, centralised conservation policies have prevailed since the colonial era, and wildlife policy continues to be very restrictive in terms of community use. An exclusionary protected area approach in national parks and game reserves has been maintained since independence. Tanzania has one of the highest proportions of protected lands in the world: 26% of the country is under strict protection, yet new game reserves and national parks are still being created. National parks are set aside for non-consumptive uses only, like photography, while the game reserves allow limited use, but no community participation in conservation management.

State-run protected areas have conserved resources such as wildlife and contributed to the national economy, but have also caused poverty amongst rural people due to loss of lands and resources (Nelson, 2004). Communities also suffer significant economic costs from wildlife through crop raiding, livestock predation and loss of life. Animals such as elephants, lions and crocodiles kill dozens of people every year in Tanzania, representing an actual or potential source of poverty in many rural areas (Nelson, 2004). The livelihoods of pastoralist communities in the north of the country have been so disrupted by restricted access to natural resources (due to both protected areas and commercial ventures) that pastoralists are increasingly having to migrate to Kenya.

Following the poaching crises in the 1970s and 80s, there has been growing recognition of the need to engage and compensate local communities if conservation is to succeed. Since the late 1980s, outreach and benefit-sharing programmes by the Tanzania National Parks Authority (TANAPA) have helped reduce impacts on communities

living with wildlife. Despite these efforts, more needs to be done to enhance the benefits for local communities from national parks so that these "islands of wealth" also contribute to local economies through mechanisms for equitable benefit-sharing. In addition, some donors (eg. GTZ) and conservation NGOs have been promoting a shift towards more participatory and community-based conservation approaches.

Box 20. Economic importance of natural resource sectors in Tanzania

Forests provide:

- Employment to about 1 million people officially, and 5-10 times more unofficially and on a part-time basis.
- 10-15% of Tanzania's registered export earnings.
- 2-3% of gross domestic product (GDP) for officially recorded forest products.
- 95% of Tanzania's energy supply through fuel wood.
- Approx. 75% of construction materials.
- 100% of indigenous medicinal products.
- Potential for tourism, the pharmaceutical industry and carbon sequestration (carbon value estimated between US$664 and 1,500, depending on information source).

Wildlife provides:

- Annual hunting incomes to the government estimated at 30 million US$.
- About 9 million US$ per year from wildlife leasing companies.
- Annual illegal wildlife hunting (meat) income, estimated at 50 million US$.
- A key source of protein: well over 75% of the Tanzanian population eat wild meat, and for 95% of the rural population it is the most important animal protein source.
- Export value: in the 1990s more than 1,68 million birds, 521,000 reptiles, and 148,000 amphibians and 12,000 mammals were exported
- Tourism revenue, which has grown on average 30% annually, partly due to the attraction of wildlife.

Fisheries provide:

- Export values: these totalled 130 million US$ in 2003, corresponding to more than 10% of total exports. The export value of Nile Perch alone came to 100 million US$ in 2003.
- Employment for artisanal fishermen, the numbers of whom have roughly doubled since 1995, reaching close to 120,000 in 2003.
- Revenue: 9.5 billion Tanzania Shs (TZS) were collected in revenue in 2003-4.

Source: URT and Danida (2007)

8.2. Restrictions on wildlife hunting

The trend of removing control over natural resources from rural people who depend on them has occurred throughout the history of Tanzania's environmental legislation (Singleton and Capper, 2004). Tanzania has increasingly restricted game hunting and increased the centralised control over game, culminating in a total ban on unlicensed hunting in 1974. Laws prohibiting the use of wildlife or forest products often have negative impacts on local livelihoods and on conservation, since they are generally unenforceable without local support. The current widespread use of bushmeat, despite the ban on unlicensed hunting, is one example (Nelson, 2004). Without incentives in the form of benefits or management rights that might encourage locals to prevent overexploitation of the resources on their land, rural people end up exploiting resources unsustainably. The key to addressing this situation is to vest local users with the authority and responsibility for NRM decisions and to ensure that they are able to benefit from their local resources (Nelson, 2004).

Rules on community rights to hunt wildlife are very restrictive. Resident hunting (RH) permits, intended to provide a legal means for bushmeat consumption for subsistence, are unaffordable to most villagers. They mostly serve commercial users among urban citizens and non-Tanzania elites. Hunting concessions are often given on village lands, with little consideration of community rights. The lack of incentives for communities to manage resident hunting is seriously affecting game populations across the country and the RH system is effectively subsidising the depletion of Tanzania's wildlife resources (Singleton and Copper, 2004). Much of the problem stems from the lack of local control over wildlife. Although RH is not meant to be a commercial practice, few District Game Officers have the staff or resources to adequately monitor and regulate it. Furthermore, there is little data available on the status of wildlife outside national parks in Tanzania, which makes it impossible to set sustainable quotas. The local people best suited to monitor and most deserving to benefit from RH are not incorporated into the system. Until local people receive benefits from hunting which takes place on their land, they have no incentive to help monitor the practice and enforce the regulations. All revenue from RH currently goes directly to the District Council General Fund and no direct correlation is made between villages maintaining healthy wildlife populations on their land and the revenue such management attracts (Singleton and Copper, 2004).

8.3. Community wildlife management and WMAs

A notable shift in policy occurred with the new Wildlife Policy (1998) and Wildlife Conservation Regulations (2002). The wildlife policy encourages all initiatives "to involve all stakeholders in wildlife conservation and sustainable utilisation, as well as in fair and equitable sharing of benefits". It allows communities to register Wildlife Management Areas (WMAs) on village land outside protected areas, and so obtain rights to use and benefit from wildlife. The WMA policy is intended to prevent wildlife depletion outside protected areas, given the impact of this on wildlife populations within them. It also recognises the limited capacity of the government to manage wildlife alone.

Under a benefit sharing formulae for the revenue from game fees agreed between the Ministry of Natural Resources and Tourism and the Ministry of Finance, WMAs receive 25%, Tanzania Wildlife Protection Fund 25%, district councils 15%, and the Ministry of Natural Resource and Tourism receives 35% (Maganga *et al* 2007).

However, progress with translating the new community wildlife policy into practice has been slow, and much uncertainty remains about rights and responsibilities for managing wildlife and the distribution of benefits from hunting and other tourist enterprises. The WMA pilot phase was launched in January 2003, and by the end of 2006, only four out of the 16 pilot WMAs had been gazetted. By October 2007, a total of nine WMAs had been gazetted and issued with user rights. Another five WMAs were still in the process of being gazetted, while one WMA was stopped due to conflicts between villages (Maganga *et al.,* 2007).

All pilot WMAs should be given the necessary "Authorised Association"[50] status and user rights as soon as possible so that they can start operating and earning money. Furthermore, rather than "benefit-sharing", communities

50 The official approval needed to operate as a WMA.

should be allowed to keep all the income from tourism and hunting on their land, but pay taxes on it so that the government gets its share too (Baldus *et al*., 2004).

The WMA regulations are complex and cumbersome, requiring a series of management plans, four approvals from the Wildlife Division, and environmental impact assessments. In total this amounts to 12 steps (Nelson, 2007). They are difficult even for technical experts to understand, let alone communities, and go far beyond what is required for government protected areas. Some communities have invested substantial time and resources to get through the approval process and have still received no benefits. Following the expectations raised by the new policy, the delay in approval and operation of WMAs has led to frustration amongst communities, who have turned potential WMA areas into settlements, allowed outsiders to invest in tourism without waiting for WMA status, or even sold their land for very little money, thus losing the future income potential of a WMA (Baldus *et al*., 2004; Nelson, 2007).

Compared to other more successful CWM programmes, such as Namibia's communal conservancies, Tanzania's CWM framework has many more requirements, yet the user rights granted to communities are considerably more limited. Similarly, the requirements of Tanzania's own community forest management framework are relatively simple and the rights granted relatively strong (see Section 8.4 below). Another difference is that while village councils and their committees are empowered in community forest management, WMAs require a new community-based organisation to be created, which is supposed to report to the village councils. Creating new institutions is difficult and accountability relationships take time to form. By contrast village councils have been evolving in Tanzania for over 30 years. Although they remain weak in many cases, they have allowed community-based forestry to evolve more quickly (Nelson, 2007).

Furthermore, the new policy may have been adopted more in response to pressure from donors than out of true commitment; the Wildlife Division of the Ministry of Natural Resources and Tourism has controlled wildlife assets for many years and generates significant revenues from hunting and tourism. Wildlife authorities at both central and district level are thus reluctant to share wildlife revenues and power.

In order to promote implementation of the WMA policy, there is an urgent need to remove the red tape and revise the WMA regulations based on local experience and perspectives. Priorities for action-research include:

- Gather the concerns of local communities to make a stronger case for revising the WMA regulations.
- Understand the range of concerns across different WMAs.
- Bring key stakeholders to the table to negotiate roles.

8.4. Participatory forest management and its impacts

Tanzania's 1998 National Forest Policy encourages participatory forest management (PFM) and seeks to integrate biodiversity values in forest management. Under the *Land and Village Land Acts (1999)* and the *Forest Act (2002)*, communities can register unreserved forest lands[51] as village forests to gain full ownership and management responsibility. This legal transfer of rights and responsibilities from central to village government is known as community-based forest management (CBFM). Communities can also enter into Joint Forest Management (JFM) agreements with the central or local government for devolved management on reserved forest land. Under JFM, forest management responsibility and returns are divided between government and forest communities. Participatory forest management (PFM) is an umbrella term that includes both CBFM and JFM.

The National Forest Policy (1998) and subsequent Forest Act build significantly on local experience with community forestry in several regions (Wily, 2003). A number of pilot PFM projects were initiated around the early 1990s under the Village Land Act. For example, the Government of Tanzania initiated the HASHI project for soil conservation

51 Around 19 million hectares of forest land in Tanzania (or 57% of forests) are largely unprotected and lie outside government forest reserves (Blomley and Ramadhani, 2006).

in 1986 (Box 21), and has been the major donor for the project, along with NORAD. Rather than taking the usual externally-driven approach, HASHI supported existing local institutions and management systems. This was quite a radical step for the government to take at the time and the experiment paid off. It shows the importance of building on local institutions and knowledge to secure local people's active involvement in forest management.

The success of HASHI, and similar pilot initiatives implemented by a range of actors (eg. NGOs, local government) with support from bilateral donors, played a big part in bringing about the new policy on participatory forest management. These well-documented pilots across the country demonstrated the viability of PFM under a range of social and ecological conditions. They also coincided with a review of forest policy in the late 1990s, and reforms in Tanzania's economic and political spheres, all of which directly contributed to a favourable legal environment for PFM (Blomley and Ramadhani, 2006).

Biodiversity benefits

A recent government assessment found that PFM is operating or being established in over 1,800 villages and extends to 11% of total forest cover. Notable examples include the East Usambara forests of Tanga region, highland forests of Iringa, miombo woodlands and coastal forests in Tanga, Mtwara and Lindi regions (Blomley, 2006). CBFM in particular has been promoted widely and is spreading rapidly.

Box 21. The HASHI community-based forest management project

Trees are key components of natural resource and risk management in dry, risk-prone environments. They provide food and medicines, fodder for livestock and building materials, and also have important cultural value. *Ngitili* or "enclosure" is an indigenous resource management system used by pastoralists and agropastoralists in such environments to provide dry season food and fodder. It involves the conservation of fallow and rangelands by encouraging vegetation regeneration through controlled livestock grazing during the wet season for use in dry times. The concept of these dry season fodder reserves was developed by the Sukuma people in response to acute and frequent drought. The Sukuma people suggested that restoring *Ngitili* was an easier and better option than planting trees, many of which were exotic and not the people's first choice (Barrow and Mlenge, 2003).

A strong memory of the *Ngitili* system and some remaining *Ngitili* provided the basis for HASHI. HASHI has significantly improved incomes, health and education, while regenerating a huge area of degraded woodland. The original objectives of *Ngitili* were expanded to cover other tree products and services required by local people, as well as dry season fodder.

The benefits of *Ngitili*

By 2000, the *Ngitili* approach had spread from 180 to 830 villages (including beyond the project area), with the benefits reaching about 2.5 million people. Forest biodiversity has been restored through 300,000-500,000 hectares of *Ngitili*, in an area previously known as the Desert of Tanzania. The area had been heavily degraded as a result of *tse-tse* fly eradication and agriculture policies. A study of HASHI conducted by the Tanzanian government and IUCN found 152 tree, shrub and climber species in surveyed *Ngitili*, along with small and medium sized mammals and many bird species (Monela *et al*., 2005).

Average incomes in participating villages have risen to twice the average for rural Tanzanians, due to increased fodder, livestock and fuelwood, and sale of forest products such as honey and poles. The health and nutrition of villagers have improved through an increase in the availability of medicinal plants and fruits from *Ngitili*, and through better water quality. *Ngitili* also act as a safety net in times of crisis. Education services have improved through investment of revenues from *Ngitili*. The GoT/IUCN study found that as many as 64% of households are better off economically. The reduced effort involved in collecting fuelwood, water and fodder has improved women's workloads.

Each community has its own rules for managing *Ngitili;* most are managed by a mix of traditional and modern institutions, but rely strongly on the former (eg. Council of Elders) to enforce regulations and sanctions. This is because traditional institutions cut across hierarchies established by government and can sympathise with diverse people in their communities (Monela *et al*., 2005).

HASHI has highlighted the following ingredients of successful forest restoration (Barrow and Mlenge, 2003):

- Local need for restoration to supply much needed goods and services.
- Desire by local people to invest in restoration.
- Presence of existing local management institutions.
- Activities by HASHI which catalysed restoration: extension, training and technical advice.
- Sensitive use of external assistance.

Village boundaries have been surveyed to help villagers obtain title deeds, which provide an incentive for future improvement. The National Land Policy (1997), the Land Act (1999) and Village Land Act (1999) have also actively supported the formal establishment of *Ngitili*. Village governments are increasingly empowered to enact village by-laws to protect *Ngitili*, using traditional rules and village guards.

Some challenges

The benefits of *Ngitili* are not evenly distributed. Men own and control land and *Ngitili*, meaning that women often require men's consent to harvest from *Ngitili*. Furthermore, access to benefits is influenced by socio-economic differentiation among or within communities. The success of *Ngitili* is in some ways widening this gap. Resourceless people are unable to own *Ngitili*, especially in areas where they would have to purchase land.

Furthermore, the establishment of new *Ngitilis* is limited by scarcity of land, insecurity of tenure, and a fear of prosecution by local authorities (Barrow and Mlenge, 2003). Similarly, the sustainability of existing *Ngitili* is threatened by population growth, land conflict and weak conflict resolution mechanisms. The sustainability of *Ngitili* hence depends to a large extent on the effectiveness of the management institutions and their ability to keep winning community trust in this mission. Key recommendations include (Monela *et al*., 2005):

1. Promote access to markets and added value for *Ngitili* products; and promote high value species and benefits in *Ngitili*.
2. Document and disseminate innovative *Ngitili* research achievements for local use.
3. Remove barriers to *Ngitili* establishment and development, including perverse legal incentives such as punitive laws and regulations, and requirement of centralised logging permits to harvest protected tree species.
4. Strengthen local and formal institutions to promote *Ngitili*.
5. Conduct further research on mechanisms for valuing non-market goods and services.

In general, PFM is working for biodiversity and livelihoods *where communities own forests*. In some cases CBFM initiatives have changed forest management and agriculture practices and are now self-sustaining, eg. LAMP projects in Babati, and the HASHI project in Shinyanga. Other CBFM initiatives have been less successful, for example in areas with higher populations, ecological constraints (eg. water) and encroachment on village forests, which in some cases has resulted in serious land conflicts (eg. in some villages in Suledo).

But on the whole, experience suggests that PFM, when well-facilitated, can lead to recovery and/or maintenance of forest quality, whether under CBFM on village land, or JFM on reserved forest. Although more research is needed to confirm this conclusively, many villages involved in PFM have reported regeneration in degraded areas, reduced encroachment of agricultural land and increase in game and wildlife numbers/diversity (Blomley and Ramadhani, 2006; Blomley *et al.,* 2007).

However, JFM still covers only 1% of government forest reserves (Assey *et al.*, 2007). JFM agreements have mostly been negotiated in high biodiversity catchment forests, where progress to devolve management responsibilities has been slow due to fear that this will enhance degradation of important ecosystems. But enhancing devolution of management rights and responsibilities to communities could improve local benefits and hence incentives for sustainable management. Villagers are mainly degrading reserve forests, rather than the village forests they own, which suggests that greater devolution could decrease rather than increase forest degradation.

Economic benefits

The economic benefits of PFM are less clear, particularly for JFM. Because these are "protected forests", with important global and national biodiversity value, local use options tend to be limited. Local communities feel they don't get sufficient benefits from JFM, and many people have argued that this is resulting in questionable agreements (Blomley, 2006). Given the limited potential for tourism and NTFP use in Tanzania's catchment forests, alternative sources of benefits need to be considered, including payments for provision of water to major cities and other ecosystem services (eg. carbon sinks and biodiversity reserves). Resistance from parts of central government to share revenues in JFM is also evident and no standardised cost-benefit sharing ratios have been agreed. This may be partly due to plans to transform the Forest and Beekeeping Department into a self-financing agency.

The large area of unreserved forest land means that CBFM has the potential to provide significant revenue to poor remote communities, where other opportunities are very limited. But there is also little evidence that the legal transfer of significant areas of forest has brought tangible local economic benefits from CBFM. Blomley *et al*. (2008) identify the following reasons for this:

- Initial areas for CBFM were highly degraded; or villagers only become sufficiently motivated to engage in CBFM when alarmed by forest destruction and loss, hence the focus of CBFM is on protection and restricted use. But after a decade of recovery, harvesting is now an option at some initial CBFM sites.

- Illegal operations operate in many parts of Tanzania (driven by increasing demand for timber from Asia, especially China, and a lack of effective controls). This occurs with the full support of village leaders and high-level staff in district and national government. These operations may be undermined or displaced when forest land is transferred to local institutions, leading to declining revenue for district staff. This conflict of interests often leads to slowing down and halting of the approval of village forest bylaws and management plans.

- The importance of revenue to district councils which is free from the sectoral conditionalities attached to much central government funding. That said, there is evidence of massive increases in the efficiency of revenue collection when this is devolved to village level. Furthermore, as in many Southern countries, the real contribution of the forest sector to the national economy, and hence its potential for taxation and revenue, is significantly undervalued.

- The presence and capacity of district staff is often severely limited. Poorly qualified staff in remote, forested districts are often misinformed about CBFM procedures, legal requirements etc. This is compounded by the more conservative views on community involvement in these areas.

- Protectionist conservation narratives, fuelled by frequent media reports of uncontrolled illegal logging, lead to an emphasis on protection over sustainable use. Many such narratives have often found their way down to community level.

- There is often limited local capacity for managing more complex harvesting and benefit-sharing processes.

- The legacy of over a century of state forest management among communities and lack of awareness of rural communities of the radical changes in policy and law have taken their toll.

Another issue which affects PFM revenues is their capture by local elites. This reduces benefits for other community members, especially the poorest villagers, thereby undermining incentives for conservation. Past interventions have tended to assume that communities are homogenous. Much research is already underway on such "elite capture" in Tanzania, and the results need to be effectively channelled to government agencies, practitioners, etc. to ensure they inform the design of more equitable PFM initiatives.

Furthermore, as forests are brought under effective local control, and illegal activities and fines are reduced, revenues to village forest management committees have become so low in many cases that the viability of PFM is threatened (Blomley and Ramadhani, 2006). Although wildlife populations tend to increase under PFM, the ability of villages to use this resource remains limited due to the restrictive and bureaucratic regulations governing community wildlife management in Tanzania. Consequently, an increase in wildlife often represents a growing cost due to crop raiding, damage to property and loss of life. However, recent experiences show significant economic potential from timber harvesting. For example, the Suledo village forest reserve has high levels of commercial *miombo* species, giving a potential annual revenue of US$ 15,000 to each of the nine villages involved. In Angai village forest, a largely unexploited coastal forest in Liwale district, estimated returns from timber are US$ 70,000 a year per village to 13 villages (Blomley and Ramadhani, 2006).

Facilitating factors for PFM

The success of PFM is influenced by conditions at local, regional and national level. Blomely and Ramadhani (2006) identified the following factors facilitating the establishment of PFM:[52]

1. *A positive legal and policy environment* which allows for the devolution of ownership and management responsibilities over forest resources to local communities. For example, the Forest Act allows local communities to declare and ultimately gazette village, group or private (ie. household) village reserves.

2. *General agreement about PFM objectives* between policymakers and senior forestry staff at national and district levels.

3. *Experienced facilitators* who have been practically involved in facilitating PFM processes at village level. Although local capacity remains one of the most critical constraints to scaling-up PFM, formal and informal networking of practitioners is having a positive impact on dissemination of local experiences and learning.

4. *Availability of internal and external financing:* PFM is an important area for funding within the forest sector, in line with the increasing emphasis on poverty reduction amongst both government and development partners. Funding for PFM comes from a number of bilateral donors, complemented by a substantial contribution from revenue generated by the Forest and Beekeeping Division.

Blomley and Ramadhani (2006) also identified three key factors that appear to undermine economic and environmental returns and hence the viability and sustainability of PFM:

1) *Environmental*: If PFM takes place on highly degraded land, potential incomes and incentives in the early stages are minimal. When communities are faced with high levels of poverty, long-term environmental rehabilitation may not be an option.

2) *Market forces*: Near large urban centres, high demand may make it impossible for villagers to prevent illegal harvesting by outsiders. On the other hand, where markets are weak (e.g. due to long distances and poor roads),

52 The Tanzania Forest Research Institute (TAFORI) has recently begun to assess the conditions under which PFM is most likely to contribute to the goals of poverty reduction, sustainable forest management and improved local governance (Kajembe, 2007). The study will assess how PFM performs in different tenurial, market and ecological conditions.

revenue from forests may be limited. Where supply is high, eg. in PFM areas adjacent to open access forest resources, this may lower market prices.

3) *Legal benefits/incentives*: The Forest Act provides a range of incentives for the reservation of village forests (CBFM), including waiving of state royalties so that produce can be sold at market rates, local government tax exemptions, and exemption from rules that protect commercially important or endangered tree species, thus transferring decisions about harvesting to village administration. However, these do not apply to JFM agreements in catchment forests, whose long term viability often seems questionable since they generate few concrete financial returns to villagers.

Strengthening institutional systems for PFM

The effective implementation of PFM depends to a large extent on getting the right institutional systems in place and facilitating the necessary changes in institutional roles.

Improving vertical co-ordination

There is a need to clarify the roles and responsibilities of village, district and national government in PFM, and to improve information flows and co-ordination between these levels (ie. vertically). Although the Forest Act is fairly clear on roles and responsibilities, there seems to be a lack of knowledge about the law which affects its implementation.

The government of Tanzania is promoting a national programme of decentralisation, with financial, administrative and political decision-making authority being transferred from central to local government. The role of central government is being transformed into one of policy guidance, monitoring and capacity-building (Blomley, 2006). This decentralisation process is helping to create a more suitable institutional set-up for PFM, but has also brought new challenges and complications. For example, the Local Government Act (1982) has split forest responsibilities between two different ministries (Forestry Division and the Prime Minister's Office (PMO) for Regional Administration and Local Government), making local co-ordination and harmonisation of forestry plans difficult and leaving some staff in the FD feeling disempowered. The degree of co-ordination between the FD and local government staff depends largely on personal relationships as there is no institutional mechanism for co-ordination on planning, resource allocation, etc. (Blomley, 2006).

Effective decentralisation will also require communities to become better organised (as per guidance for local government reform) and to demand services from higher level institutions. District or ward governments currently develop most programmes, which is a very top-down approach. Villagers do not usually make demands due to the hierarchical structure of Tanzanian society (Reed, 2001).

Similarly, Blomley *et al*. (2008) emphasise the need to strengthen community legal awareness to tackle the entrenched system of patronage involving village leaders, district staff, illegal timber operators and high level officials, and start building downward accountability of elected leaders. Breaking the web of patronage and reversing accountability are long and complex processes, though not unique to forestry, and they need to be tackled at multiple levels. As well as finding ways in which government can become more open, transparent and accountable, forest dependent communities must be made aware of the potential value of timber on their land, the opportunities under the law for capturing it, and how these rights can be claimed from local government institutions. Communities also need to be aware of the responsibilities of elected village representatives charged with forest management duties, and of district staff and councillors with respect to devolution of rights.

NGOs have an important role to play in helping politically weak community forest institutions to open and exploit political spaces so that their claims can be articulated at local and national level. Efforts at village level need to be supported by broader national efforts to combat the illegal trade in timber, given that much of the source of this poor governance originates at national level.

Improving horizontal co-ordination

Another challenge is improving horizontal co-ordination and policy coherence between different natural resource sectors to better support PFM on the ground. Legal instruments for NRM have not been harmonised properly, and there is very poor co-ordination between different NR departments (forest, wildlife, energy, water, agriculture), even within the same ministry. For example, the water department has yet to fully appreciate the costs borne by communities who conserve catchment forests providing water to cities, and hence the need to compensate communities for water provision. Similarly, the potential community benefits of PFM are much reduced due to strict wildlife regulations. Tanzania's national strategy for growth and poverty reduction (MKUKUTA, 2005) identifies the need to improve coherence between natural resource policies so as to enhance the community benefits from wildlife (see Section 8.5 below). Research is needed to identify and resolve areas of conflict between different natural resource policies and laws, and to find ways of improving co-ordination mechanisms at all levels of government.

Where a forest spans a number of village jurisdictions, there is a need for collaboration between villages at ward level to harmonise management activities and plans and address inter-village conflicts. Where forests span different wards, villages are increasingly coming together through informal management systems, with key decisions often referred to this level to ensure harmonisation and avoid conflict. If such institutions choose to distribute revenues they need to register legally, e.g. as a "union" of local governments or an NGO. Where large forests span different districts, this presents additional challenges which limit the potential for PFM adoption, e.g. divergence in capacity and interests and lack of funds for travel (Blomley, 2006).

The impacts of economic policies and processes on PFM also need to be addressed. For example, encroachment by outsiders on village forest land for farming can be a serious problem for CBFM. In some areas (eg. Suledo), this may be due to significant expansion of commercial farms in surrounding areas over the last decade, reducing available land for local farmers. The effects of politicisation (due to multi-party democracy) on vertical and horizontal linkages also need to be examined at each level of government.

Scaling-up participatory forest management

PFM initiatives are still largely facilitated through externally-supported area-based projects rather than being a routine government activity. The Tanzanian government has recently initiated a national PFM programme which aims to mainstream the delivery of services through national and local government institutions, particularly at the district and village level, supported by direct grants to local governments. Furthermore, Tanzania's MKUKUTA identifies the need to scale-up PFM in all districts as a strategy for increasing rural incomes (see Section 8.5). Blomley and Ramadhani (2006) highlight a number of lessons and challenges emerging through this process of scaling-up PFM in Tanzania:

1) *Improving financial sustainability*: Funding for PFM from international donors should be viewed as "investment capital" with which to establish a self-funding PFM system. If enough viable PFM operations are developed nationally, funds could be remitted back to central government to cover investment costs of PFM in new areas. For this to be successful, there needs to be political will at all levels to reinvest forest revenues back into forest management. Given the shortage of locally generated funds at village and district level, there are often political pressures to use these funds for other development needs (eg. building schools and clinics).

2) *Raising community legal awareness*: A widespread problem is the limited understanding of the legal framework for PFM by forest managers in rural communities, as well as facilitators and practitioners (district and NGO staff). Added to this is the confused and complex integration of legal instruments at local level, since laws are developed separately for ministries and sectors such as land, local government, wildlife and forestry. Furthermore, those responsible for disseminating and implementing the laws, such as district and technical staff, may be unwilling to divest power to villagers. Raising legal awareness of communities is thus a priority and must be done through a range of channels, such as civil society, radio, mass media, in ways which lead to demand-driven services from community to the districts.

4) *Balancing flexibility with policy compliance and standardisation*. There is a need for greater standardisation, harmonisation and quality control in the wide array of PFM approaches being implemented across Tanzania. But this must be balanced with flexibility to allow innovation and local adaptation. Providing too rigid an implementation framework can easily lead to suffocation and institutional paralysis.

5) *Developing "low cost models" of PFM.* Until recently PFM has been driven largely by externally-funded projects. Along with funding comes the risk of parallel structures, involving complex field processes and external advisers. These costly processes now need to be "stripped-down" to low-cost models that can be replicated across the country and under a wide range of conditions, whilst avoiding over-simplification.

6) *Developing a national monitoring framework.* Project monitoring tends to be externally managed and funded within limited time-horizons. By making PFM a national programme, monitoring needs to be integrated within the operations of the main implementing structures such as the FD, local governments and village institutions. However, given the limitations in local monitoring capacity and equipment, the options for detailed monitoring of impacts and outcomes are severely restricted.

7) *Institutionalising PFM at district level and below.* Although district PFM plans and budgets are being developed by district council staff, it appears that integration of PFM with other forestry activities in district plans and other natural resource sectors remains very limited. District staff still essentially view PFM as a "project", and not part of routine activities. Despite calls on districts to engage with other projects or NGOs working on PFM, co-ordination with these external initiatives remains poor. The districts also seem reluctant to allocate a portion of their PFM budgets to engaging external service providers to facilitate PFM at village level, which could address the very real capacity issues facing district technical and extension staff. Financial incentives are also needed to encourage district staff to devolve rights to community institutions (e.g. 5-10% of village revenues could mean a big increase in current forest related income for districts). But such incentives will only work once the illegal networks have been broken and staff begin to operate according to institutional mandates rather than for personal gain (Blomley *et al*., 2008).

Furthermore, poor forest governance is one of the primary stumbling blocks to the devolution of rights and revenues to communities, despite a highly enabling policy and legal context (Blomley *et al*., 2008). Current institutional incentives in central and local government prevent sustainable management of forests and community capture of benefits. Reversing the existing incentives will not only require technical solutions (guidelines etc) and capacity building (training etc) but also more radical actions that engage with the every day politics of the governed. Finally, there is a need for more substantive and independent research on the contribution of CBFM to livelihoods, and of forest goods and services to the economy as a whole, and the impacts of various forest management regimes on forest condition (Blomley *et al*., 2008).

Significant challenges remain with regard to building the capacity of local government staff so that they can respond to PFM demands from rural communities effectively. Transforming government institutions from agencies that enforce, regulate, control and restrict, to ones that facilitate, support, decentralise and disengage, cannot occur overnight. A long-term commitment is required from all parties coupled with a willingness from development partners to support the process as it unfolds and develops, rather than imposing strict adherence to project tools such as logframes and timelines.

8.5. Mainstreaming the environment: the MKUKUTA

In February 2005, the cabinet and parliament adopted the MKUKUTA[53] for implementation over five years. The MKUKUTA makes linkages with Tanzania's national development strategy—Vision 2025—and is committed to the Millennium Development Goals (MDGs) as internationally agreed targets for reducing poverty. It is organised around three clusters:

53 MKUKUTA is a Kiswahili acronym for the National Strategy for Growth and Reduction of Poverty.

1) Economic growth and reduction of income poverty.

2) Improved quality of life and social wellbeing.

3) Good governance and accountability.

Based on a review of Tanzania's Poverty Reduction Strategy Paper (PRSP) of 2000, the MKUKUTA process has helped to spearhead environmental mainstreaming in Tanzania, placing environmental issues more centrally on the country's political and development agendas. The MKUKUTA contains specific provisions for natural resources and biodiversity, including important new commitments for enhancing community benefits from natural resources (see Box 22).

The MKUKUTA process deliberately set out to mainstream cross-cutting issues, including environment, as an integral part of the strategy and not as an "add on". This was in recognition that environment was not well addressed in the first PRSP and that it is essential to achieving sustainable poverty reduction and growth. To support the mainstreaming of environment, the Government of Tanzania (with UNDP) developed a programme in the Poverty Eradication Division of the Vice President's Office (VPO) focused on:

- Improving understanding of poverty-environment links, including through policy studies, reviews of public expenditure, and participatory poverty assessments.

- Use of data to determine the impacts of policies and plans on poverty and environment issues, and development of baseline data and monitoring indicators.

- Capacity-building at national and local levels to better address poverty-environment issues, including establishment of an Environment Working Group to promote integration into development policies.[54]

Development of the MKUKUTA entailed consultations with a wide range of stakeholders across Tanzania—the biggest ever national consultation on environmental issues. The use and management of natural resources was an issue repeatedly highlighted by local people and civil society organisations (Nelson, 2004). These are being addressed through many of the targets and strategies listed in Box 22.

For each target, the strategy identifies the government agencies and actors responsible, and emphasises improved collaboration among all the sectors and stakeholders (Assey *et al.*, 2007). Ten poverty-environment indicators have been developed as part of the government's Poverty Monitoring System to monitor progress with the MKUKUTA's implementation. Other poverty-environment indicators will be monitored at sectoral and local government level as part of the monitoring and evaluation system of each responsible department. Disbursement of funding for the MKUKUTA will depend on evidence of progress with implementation. In this way, the MKUKUTA establishes a mechanism to ensure implementation of natural resource priorities by different government departments. As one person commented, the only way to challenge the lack of co-ordination between departments is to link co-ordination with finance.

Assey *et al*. (2007) point out that the apparent success in mainstreaming environmental issues into the MKUKUTA is the result of several transitions—events, initiatives and conditions—occurring over the last decade, rather than a single intervention operating independently (see Box 23). Key amongst these are improved environmental awareness (particularly due to local civil society[55] and media action); more inclusive planning processes; and partnerships with development agencies increasingly driven by Tanzania, but assisted by "environmental champions" amongst development partners. Many of them were deliberately drawn upon and brought together by the MKUKUTA, which has therefore resulted in a great leap forward in integrating environment needs into development.

54 Case study by Howlett, D. in Roe, D. (ed). 2004. *The Millennium Development Goals and Conservation: Managing Nature's Wealth for Society's Health*. IIED, London.

55 Civil society organisations have become more active over the last ten years. Several local organisations have focused on environment and its links to livelihoods, while the more established environmental NGOs (eg. WWF and IUCN), which previously tended to focus only on conservation/environment, have also started to engage more on development and poverty reduction issues.

Box 22. The MKUKUTA provisions for natural resources, biodiversity and governance

Cluster I. Growth and reduction of income poverty:

- *Target:* Reduced land degradation and loss of biodiversity.
  Strategy: Improve land management including tree planting, establishment of Village Land Forest Reserves (community-based management) on village land and maintaining integrity of protected area network.
- *Target:* Increased contributions from wildlife, forestry, and fisheries, to incomes of rural communities.
  Strategies:
  - Develop programmes for increasing local control and earnings in wildlife management areas, and establish locally managed natural resources funds, drawing on local traditional knowledge
  - Scale-up Participatory Forest Management in all districts, as a mechanism for increasing income of rural communities from natural resources management
  - Harmonise natural resource sectors policies and strategies and remove any conflicts in laws and regulations. Improve land conservation measures, and community based and environmentally sound natural resource management.

Cluster II. Improved quality of life and social well-being:

- *Target:* Reduction in land degradation and loss of biodiversity
  Strategy: Build capacity of local government authorities and the National Environmental Management Council to manage natural ecosystems and protect resources from undue negative impacts through the implementation of natural resource management plans.

Cluster III. Good governance and accountability:

- *Target:* Ensure representative, inclusive (poor and vulnerable groups) and accountable governance institutions operating at all levels.
  Strategies:
  - Enforce and harmonise policies and laws relevant to land and natural resource use and management; all village lands to be surveyed and issued with certificates.
  - Strengthen security of tenure of demarcated village lands held communally or individually and remove conflicting provisions in laws that manage sectors such as mining, pastoral activities and wildlife.

Box 23. Factors facilitating environmental mainstreaming through the MKUKUTA

- Giving one ministry—the VPO—responsibility for both environment and poverty.
- Presence of a group of environmental champions.
- A programme to integrate environment into the PRS, which started a year before the major PRS review.
- Forming a strong Development Partner Group on the environment.
- Government support for improving local self-reliance in responding to needs and opportunities.
- A participatory poverty assessment which clearly stated that environment was a priority need for poor people.
- A ministry of finance that wanted to investigate environmental expenditure and revenue as part of the public expenditure review process.

Source: Assey *et al*., 2007

The VPO—a high level non-sectoral agency that co-ordinated the MKUKUTA process—proved an effective location for co-ordinating the mainstreaming process. If a separate environment organisation had led the work, the process might have been seen as environmental "special pleading" or "territory-building" and might not have been integrated fully into the MKUKUTA process. Since the VPO had organised the MKUKUTA's system of inter-departmental co-ordination for poverty reduction, and also holds the national environmental mainstreaming mandate, it was able to link the two and engage environment-dependent stakeholders. Furthermore, the VPO's high standing enabled

it to convince a critical player, the Ministry of Finance, to take responsibility for bringing poverty-environment issues into core agendas. A Public Expenditure Review for the environment sector, which showed the considerable potential of environmental resources to contribute to revenue, helped the MoF to understand the potential of investing in environmental management for poverty reduction. As a result, the environment budget grew by over five times between 2005/06 and 2006/07 (Assey *et al*., 2007).

The VPO co-ordinated the environmental mainstreaming programme with key national environment agencies, and was assisted by a technical advisor for the Environmental Integration Programme (funded by DFID and DANIDA). The programme has enabled a leap forward in awareness amongst decision-makers by marshalling many facts, figures, opinions and ideas, and linking the protagonists. The process has also improved the linkages between planning initiatives in the fields of poverty, finance and environmental legislation.

However, achieving some of the new goals identified in the MKUKUTA may take time, particularly where they affect the long-standing interests of powerful institutions (eg. the Wildlife Department). Assey *et al*. (2007) note that, although important foundations have been laid, Tanzania still needs to translate the MKUKUTA's environmental mainstreaming objectives into routine budgeting, investment and governance reforms to enable their implementation. They highlight the need to:

- Strengthen environmental investment, by identifying priorities amongst the strategy's main targets in order to make up for severe under-investment in environmental assets for pro-poor growth and livelihoods.

- Strengthen environmental capacity, including information and monitoring systems and in particular the capacity of local government agencies to address poor peoples' diverse environmental needs.

- Shift power towards local environment dependent stakeholders, through environmental governance reforms that will enable poor people to have clearer environmental rights and responsibilities, access to resources and effective relationships, as well as tackling associated social exclusions.

Assey *et al*. (2007) also identify a number of lessons from the MKUKUTA process which have broader relevance for environmental mainstreaming (Box 24).

Box 24. Lessons on environmental mainstreaming from Tanzania

1) *National leadership is essential*: environmental mainstreaming is best driven by national and local champions within and outside government who can work together and who are preferably empowered by a high level mandate. External partners should support the process through building partnerships and providing technical and financial support according to demand, but should not attempt to lead it. When donors have pushed environmental agendas, this has not served environmental interests well, since most of them are intimately woven into national and local circumstances. However, donors need to actively engage on environmental issues and poverty-environment links—ideally by three or four major donors—to keep the issue high on the agenda.

2) *Environment needs to be promoted as a poverty reduction issue* and not seen as a brake on development: a key challenge is to see people as part of the solution to environmental degradation and build environmental assets to support livelihoods of livestock keepers, farmers and other poor groups. This involves changing the views of environmental agencies, NGOs and others away from a focus on environmental protection to environment as a driver of growth and foundation for livelihoods. This may entail the creation of units or posts on poverty-environment issues in environment institutions, and development of environment guidance tailored to different sectors and localities.

3) *Generating evidence and sharing knowledge*: awareness of poverty and environment links is essential to change peoples' perceptions, but the links have not been fully explored in most countries. This often requires research, analysis and sharing existing knowledge with decision-makers and the public to demonstrate the livelihood and economic significance of environmental issues.

4) *Trade-offs cannot be avoided*: development activities that help environmental conservation and *vice versa* should receive priority attention. However, the need to protect ecological limits and basic welfare needs limits the scope for win-win solutions. Debates and decision-making procedures need to lead towards some of these fundamental trade-offs.

5) *Engaging mainstream sectors is important*: different sectors and actors view environmental issues differently. Some will not have a clear understanding of what it means and may feel they are doing nothing on environment when they actually are (eg. water and health sectors). Thus, debate and national and local guidance on what environment means to each sector—as opportunities, dependence and threats—is essential.

6) *Promoting the voices of the poor is central to effective mainstreaming:* local consultations which clearly articulate the views of poor people and enable these voices to be heard at higher levels can accelerate environmental mainstreaming by driving home the human dimensions. Because of the potential power of such voices, they need careful synthesis, independent assurance and clear caveats. The process requires time, resources and political commitment, but builds real ownership and effective strategies and policies. Without it, environment is likely to be treated as a marginal, technical concern.

7) *The private sector needs to be involved throughout*, from small to large enterprises. Without this, it will be more difficult to attract investment and create incentives for innovation, technological development and change. Private sector environmental champions and drivers of change need to be identified and engaged early on.

8) *Budgets count!* Environment issues should be included in the budget process, sector budgets (government and other) and expenditure tracking systems. Environmental organisations need to have a good knowledge of budgetary and financial processes; areas which are currently often weak.

9) *Working with other cross-cutting issues* which are commonly neglected in national planning processes, such as gender and HIV/AIDS, can help groups to learn from each other on the tools and best practice for mainstreaming; enable shared issues to be better addressed (e.g. environment and gender); and reduce transaction costs for those who would otherwise have to conduct several separate mainstreaming exercises.

9) *Timing is key:* environment needs to be addressed from the beginning of a process. It may be useful to map various policy and planning processes and their openness to environmental issues and seek entry points at the start of relevant reviews or new processes. This may mean waiting for the start of a process or sowing the seeds for mainstreaming in advance of it and being strategic in using opportunities (rather than implementing major initiatives at the end of an old process).

Source: Assey et al. 2007

8.6. Tanzania's NBSAP and mainstreaming biodiversity

Although the MKUKUTA identifies the need to reduce the loss of biodiversity and enhance community benefits from natural resources, it does not address the role of biodiversity *per se* as a resource for poverty reduction. The role of Tanzania's natural resources in supporting livelihoods is increasingly recognised, but there seems to be

limited appreciation of the role of biological *diversity* and agro-biodiversity in providing nutrition, medicines, food security, resilience and income to poor rural communities. In Tanzania, the term "biodiversity" is still often associated with conservation through protected areas, and it may thus be counterproductive to use it when trying to engage development sectors without a prior awareness-raising effort.

Prior to the MKUKUTA, a national biodiversity strategy and action plan was developed by the Vice President's Office (Environment Division), following the WRI/UNEP/IUCN Guidelines for National Biodiversity Planning. The VPO was mandated to establish partnerships with government sectors and institutions, NGOs and community leaders, as well as business and industry. Sectoral consultations were held with over 20 government and NGO sectors and agencies throughout the country between May and August 1998. Five zonal workshops were also held to identify threats and opportunities for biodiversity conservation and sustainable use in coastal, arid, wetlands, montane and agricultural land. However, since its approval the NBSAP has largely remained a tool for accessing international funds for conservation projects, rather than one which promotes implementation by different sectors.

The "representatives" of ministries and agencies who participated in the NBSAP formulation process were often mid or lower level officials who did not necessarily represent the views of the institution. As result, the decisions reached were not binding for the institutions concerned (Mwalyosi and Sosovele, 2001). This was also the case for Tanzania's National Environmental Action Plan (NEAP) and NCSSD, the National Conservation Strategy for Sustainable Development (Mwalyosi and Sosovele, 1999). The political status of the NBSAP process and its product may have been higher if it had been co-ordinated by Tanzanian political leaders, as opposed to three international biodiversity consultants as an environment sector initiative.

Furthermore, with the on-going local government reform process, the management of biodiversity in Tanzania will devolve to the district and local levels. However, it may be difficult for initiatives developed at the national level, such as the NBSAP, to be implemented at the district level and below, largely because local governments lack adequate legal powers and financial resources (Mwalyosi and Sosovele, 2001).

8.7. Influencing policymaking and implementation processes

Understanding the governance context

Tanzania has not been a multi-party state very long; the legacy of a long one-party socialist history is still evident in the hierarchical structure of society and the power of government. Tanzania's post-colonial regime (from the 1960s to mid-1980s) attempted to control the economy and the natural resource base more comprehensively than in any other African country. Equally comprehensive were its efforts to fragment and dominate the country's civil society. In the subsequent era of economic liberalisation and re-structuring, Tanzanian policymakers have continued to take a very centralised approach and have not adequately involved local communities in decisions that affect them. This has led to the creation of laws and institutions that are not responsive to local needs and are often unpopular and unsupported (Reed, 2001).

In general, good governance in Tanzania seems to have declined over the last couple of decades. The continued centralisation of political power in the emerging liberalised economy has facilitated increasingly close bonds with economic actors whose wealth has grown under the new regime rules. This deepening convergence between political and economic elites has generated concern about the degree to which corruption dominates national political life.

Community opportunities to influence policy

A multi-stakeholder workshop in 2003 concluded that local communities have very little influence over conservation policy, far less than any other stakeholders. The workshop recommended that they should have a central role in shaping conservation policy (Swiderska *et al.*, 2003). Local people are seldom involved in policymaking or implementation. While government policy talks about community participation, and TANAPA claims to be involving local communities in conservation planning and management, this does not seem to be happening on the ground.

Many local communities are remote, without communications or effective representation other than through the local government hierarchy, which is not a very effective channel for voicing community concerns.

The formal mechanism for raising community concerns at the national level is to take concerns to the village government, who then passes them to the district government and then on to the national government. This mechanism depends very much on the willingness of the different levels of government to relay those concerns, and this willingness may be lacking, especially if the concerns conflict with their interests. Although there are democratic structures at the local level, such as the Village Assembly and the District Council, most of the power still rests with officials who are *appointed*, as opposed to elected. Village governments are often managed in a top-down manner by individuals who are "not aware" of the formal requirements for managing them. For example, the Village Assembly is the highest organ at this level empowered to take policy decisions, but it appears that assembly meetings rarely take place, partly because the villagers themselves are often unaware of their right to hold them (Swiderska *et al*., 2003). A recent study has given detailed accounts of the corrupt and violent practices of village governments in some parts of Tanzania, and highlighted the predatory relationship between village government and the central and district governments (Brockington, 2007).

In the conservation sector, the government has conducted a number of consultation exercises in connection with the development of new policy and legislation and this process often includes local communities. While on paper this may seem like an adequate forum for ensuring all views are taken into account, the *nature of consultations* makes effective participation very limited. Typical consultations involve local and regional workshops to which local communities are invited. However, because of the formalised and hierarchical structure of government, local people actually have limited opportunities and willingness to voice concerns in these fora. Tanzanian culture makes it difficult to criticise those who are in a higher position of authority and so even if opportunities are presented for local communities to have their say they often decline to raise concerns. Furthermore, since it is the government that identifies which stakeholders to involve, it can easily sideline those who are too critical, while at the same time claiming broad representation (Swiderska *et al*., 2003).

Overcoming the institutional and political resistance to devolving control over valuable resources will require longer term efforts to strengthen civil society and support participation in policy processes and negotiation with the state.

Conservation NGOs and policy influence

Grassroots organisations have little influence on national conservation policy unless they are effectively networked at national level. National conservation NGOs that work with local communities provide an important conduit for raising local concerns at national level through their own consultation processes (eg. Tanzania Forest Conservation Group's Community Forest Network, which links together communities involved in forest management and to local and national government). However, national conservation NGOs do not necessarily try to influence policy; they tend to be more concerned with implementing projects on the ground. International conservation NGOs, which tend to follow a more protectionist approach, have more influence on Tanzania's conservation policy because they are better resourced than national NGOs (Swiderska, *et al*., 2003).

As well as bringing community concerns to the government level, NGOs also play a key role in translating government policy to the local level. However, this flow of information from government to civil society is not as simple as explaining policy—much government information, other than policy, remains classified. Where information is not officially classified, barriers to accessing it are common, for example red tape requirements for research permits.

A few civil rights groups in Dar es Salaam (eg. LEAT – the Lawyers Environmental Action Team) are actively seeking to influence conservation policy to reduce the social impacts of protected areas. However, civil rights groups tend to have less influence over policy than conservation NGOs since vocal organisations risk being sidelined from policy processes. Under the 2002 NGO Act, advocacy organisations which become too active risk being de-registered. The act is seen by many as an attempt by the government to assert powers of registering and de-registering NGOs according to its wishes. Furthermore, most organisations addressing land-use conflicts associated with protected areas (eg. pastoralist associations) are based in Arusha in northern Tanzania, where such conflicts are more pronounced.

Other actors with policy influence

Some donor agencies have significant influence over conservation policy, often greater than that of NGOs. GTZ, for example, has played an important role in promoting the introduction of participatory conservation policies through pilot projects and policy dialogue. However, because of their close relationship with the central government, many donor agencies and international conservation NGOs have not supported community resource claims or strengthened civil society engagement in institutional reforms (Nelson, 2007).

Furthermore, the institutional incentives of donor agencies do not encourage the kind of long-term, flexible support needed to transform existing power relations and resource governance institutions. Community wildlife management (CWM) is essentially "a political process and thus requires adaptability, flexibility and opportunism", rather than projects which are rigid, large-scale and short-term (Nelson, 2007). Thus, CWM should arguably be supported through donor *governance* programmes rather than environment programmes.

Elected MPs also have a potentially important role to play in highlighting community concerns. In certain cases—where MPs have their constituents' interests at heart—they have been influential in ensuring proper consultation processes. In others, MPs may come from a different tribal background to many of their constituents and thus have little interest in voicing their concerns. Some people feel that significant policy change is unlikely until a new generation of bureaucrats comes into place in about 10-15 years time (Swiderska, *et al*., 2003).

Ways forward

The 2003 study on civil society influence on policy identified the following possible activities that could be pursued to strengthen civil society's influence on conservation policies and promote a more pro-poor approach:

1. Extend the role of the NGO Policy Forum to advocacy on community-conservation conflicts, and strengthen the involvement of regional grassroots organisations working with affected communities, eg. pastoralist groups in Arusha.

2. Increase the efforts of international donors and NGOs to strengthen Tanzanian civil society from national to village level (eg. through financial support, capacity building, etc.), and persuade the government of the need to become more responsive to civil society (eg. by amending the NGO Act, and making decision-making mechanisms more inclusive and transparent).

3. Raise awareness amongst MPs about community-conservation conflicts, and strengthen their links with civil rights groups and representatives of affected communities.

4. Increase the participation of civil rights and development NGOs in the Donor-NGO Informal Discussion Group on Environment, and in similar fora.

In terms of the process attributes of effective policy, this case study highlights the critical need to:

- Shape policy on the basis of local experience and stakeholder participation.
- Experiment with new approaches in order to inform policy.
- Continuously inform and refine policy and law based on local experience.
- Strengthen vertical and horizontal information flows and co-ordination.
- Renegotiate and redefine the role of different actors, and truly empower local communities to play an active role in resource management.
- Ensure policy is accompanied by the necessary institutional change for implementation.

- Provide strong political leadership and incentives to promote institutional change.

The following general tactics for influencing policy were highlighted:

- As a first step, identify allies amongst policymakers.
- Avoid a confrontational approach, otherwise policymakers will not listen (ie. voice concerns in private).
- Provide information to advocacy organisations to increase public pressure.
- Using direct links to policy processes, eg. through participation on government committees, often promotes more rapid change than normal research dissemination activities (eg. workshops).
- Avoid the risk of community-capacity building work being perceived as "mobilising" communities to revolt.
- Bring different government departments together to promote co-ordination. For example, the Directors of Conservation conferences organised by IUCN/East Africa Office engage finance ministries and identify action points for them to address.
- Take policymakers to the field to promote awareness of conservation and livelihoods issues and linkages, and to generate interest in these issues (eg. IUCN/ EAO organised a trip for East African MPs to visit community initiatives near Mount Elgon).

8.8. Suggestions for action-research

Tanzania's natural resource policies have shifted towards community participation and benefit-sharing. Action-research is now needed to assist the implementation of these new objectives: to understand effective approaches and the institutional systems needed to deliver them, and to facilitate institutional change. The MKUKUTA also provides a clear mandate for scaling-up participatory NRM and improving NR governance and policy coherence.

Case studies on participatory NRM

Action-research case studies could be conducted in order to make governance systems more supportive of participatory NRM and its wider adoption. These could focus on how external governance (ie. policies, institutions and processes) and village governance affect outcomes for biodiversity and livelihoods, and seek to improve governance systems through the research process. Whether the focus is on PFM, CWM or other NR sectors, eg. fisheries, the case studies could explore horizontal co-ordination between sectors; vertical linkages between levels; and local institutions (see below).

Given the need to strengthen the capacity and confidence of local communities in order to improve implementation of participatory NRM, the research process should include a strong community capacity-building dimension and should actively involve communities. It should also explore the concerns and priorities identified by local communities (eg. through the Tanzania Forest Conservation Group's (TFCG) community forest network on PFM, and the Arusha-based Natural Resources Forum). In this way the research can both address these concerns directly (in a technical sense) and strengthen the evidence and arguments needed for getting them addressed at political level.

A national learning group on NR governance could be established to bring different actors together (researchers, communities, district government, national government departments, NGOs). It could discuss the findings of the case studies, help build understanding between the different stakeholders, and channel the findings to inform policy processes. Such a forum could either focus on a single NR sector (eg. PFM or WMAs), or on a combination, given that community-based management across NR sectors faces similar governance challenges. This would also be useful to promote learning and co-ordination between sectors. There is limited communication between the forestry, wildlife and fisheries departments, even though all are seeking to promote community conservation approaches.

The case studies should also seek to strengthen the capacity of Tanzanian organisations in defining the research agenda—too much research in Tanzania is consultancy driven, rather than being directed by the strategies of Tanzanian research organisations. The studies could also strengthen links between Tanzanian researchers and practitioners/NGOs working with local communities (eg. TFCG's community forestry network, and the Natural Resources Forum) to promote a more demand-driven research agenda.

PFM: key issues for action-research

1. Horizontal linkages and co-ordination:

- How different NR policies, institutions and processes affect PFM (eg. wildlife, water, agriculture, livestock, land tenure) and how to make these more supportive of PFM (see Section 8.4).

- How economic policies and processes affect PFM (eg. macro-economic reforms, market prices, subsidies and incentives).

- How to establish more integrated institutions at higher levels which support cross-sectoral integration at village level.

2. Vertical linkages and information flows:

- How effective are information flows on PFM from national to district to village level and how can they be improved?

- How can mechanisms be improved for local communities to voice concerns, make demands and engage in policy dialogue at district and national levels?

- How to promote devolution from district to local level and improve downward accountability?

3. Village level governance:

- What kind of local institutions and processes are needed to prevent elite capture and ensure benefits reach the poorest groups? How to ensure fair representation and accountability? How can existing research on elite capture in Tanzania be effectively targeted to inform the design of PFM initiatives?

- PFM uses village level NR committees which are part of village government, while WMAs use non-governmental actors as managers (eg. a CBO or registered association). What difference does this make for representation, accountability and equity?

4. Scaling-up PFM:

- A key challenge is to get district governments to adopt PFM as a routine programme. Incentives need to be developed to encourage them to re-invest NR revenues in PFM, along with capacity-building in facilitation and support for PFM.

- What are the governance factors that facilitate the establishment, viability and spread of PFM initiatives such as HASHI? What made the government take an approach based on local knowledge and traditional institutions, rather than the usual externally-driven approach? How do traditional institutions and governance systems interface with political governance systems of communities? How is this interface recognised at higher levels? Why has the *Ngitili* approach spread from 180 to 830 villages? How did HASHI influence forest policy? Were all the lessons brought into the PFM policy process?

5. Improving benefits and devolution (JFM):

In central government reserve forests with high biodiversity value, the following research is needed to enhance devolution and benefit-sharing with communities:

- Assess the conservation and livelihood impacts of initiatives where management and ownership rights have been devolved to local communities (eg. possibly Amani), as compared to similar areas with limited or no devolution.

- Use participatory analysis and hard data on the costs and benefits of conservation to communities, and the extent to which local conservation efforts benefit wider society (eg. quantity of water provided), to strengthen arguments for community payments for environmental services.

- Identify and develop feasible revenue-generating options, including mechanisms for payments for water ecosystem services, and private sector-community partnerships. Explore appropriate mechanisms for redistributing revenues from PFM downwards (eg. public goods or cash hand-outs?).

- Explore options for harvesting in biodiversity-rich forests that are designated as production rather than protection forests; develop mechanisms for sharing benefits.

Much research on PFM is already underway in Tanzania, mainly on catchment forests and JFM, which could be synthesised and used as advocacy material for influencing policy. While village forests (CBFM) may have lower biodiversity value, scaling up such initiatives has the potential to improve the livelihoods of millions of people in Tanzania.

Wildlife and protected area policy: key issues for action-research

There is a critical need to make rules for wildlife use less restrictive whilst ensuring wildlife is conserved. The high value of wildlife resources mean they hold significant potential for poverty reduction, but tapping this potential may be difficult for communities because of its value. The following action-research priorities were identified:

- WMAs: revise the WMA regulations to reflect community experience and concerns and clarify stakeholder roles (see Section 8.3).

- National parks: set up mechanisms for equitable benefit-sharing with local communities.

- Community-based ecotourism: address local and national governance constraints to devolution.

Understanding the value of biodiversity to livelihoods

Research is needed to improve understanding and awareness of the contribution of Tanzania's biodiversity to local livelihoods, including its role in enhancing resilience of agriculture systems (to drought, crop failure and so on); and its contribution to nutrition, healthcare and income. Participatory assessments to explore the value of biodiversity resources to livelihoods could be conducted as part of the community case studies.

The community case studies could also provide examples of environment-livelihoods integration which could be used to promote mainstreaming at national level. However, further scoping and consultations will be needed to develop the focus and approach of future research on biodiversity governance in Tanzania.

CHAPTER 9. PERU

Micha Torres, Krystyna Swiderska and Alejandro Argumedo

Research background

This case study is largely based on:

1) A study on national biodiversity and poverty reduction policies in Peru by Micha Torres, May 2005,[1] involving interviews with a range of stakeholders.

2) A workshop in Lima on Coordination of Policies on Biodiversity and Poverty: Case studies and the Peru-Brazil Inter-Oceanic Highway, hosted by IIED, Asociacion ANDES and CONAM (the National Commission for Environment), May 2005.

3) A participatory study on biodiversity-poverty linkages conducted with Quechua farmers, co-ordinated by the ANDES, April-July 2005.[2]

Peru is the world's fourth most mega-diverse country, with abundant wildlife in the Amazon and rich agricultural biodiversity in both Andean and Amazon regions. About 40% of the world's foods have been domesticated in Peru, including 3,000 varieties of potato, over 2,000 varieties of sweet potato, 50 ecotypes of maize, 4 types of native cereal and over 1,400 medicinal plants (Brack Egg, 2000). Peru also has considerable cultural diversity, with 43 languages and 14 linguistic families. Agrobiodiversity in Peru is always associated with the traditional practices and cultures of indigenous and peasant farmers. The indigenous population has domesticated and improved a significant number of crop varieties and livestock breeds, many of which have been conserved by farmers despite the threats of cultural change, rising consumption, intensification of agriculture, natural phenomena (climate change) and ecosystem degradation. Although a great deal of *in situ* conservation activity is still undertaken by peasant farmers, with the growth of markets and other exogenous factors, these conservation practices are starting to erode.

The incidence of poverty, and extreme poverty in particular, is much higher in rural than urban areas, and often coincides with centres of rich biological and cultural diversity. Thus, many of the poorest people in Peru depend on biodiversity resources for jobs, income, agriculture, food, medicines, clothing, shelter, ecosystem services etc., and erosion of biodiversity or restricting access to it exacerbates poverty. The poor are likely to suffer most from the destabilisation of ecosystems and loss of biodiversity resources and associated opportunities for development. At the same time, erosion of cultural diversity is leading to the loss of traditional knowledge, practices and values of indigenous people and farmers, despite their role in the conservation and sustainable use of biodiversity.

9.1. Protected area co-management

Latin American countries are generally more progressive in recognising indigenous peoples' rights than African or Asian countries, and many have established indigenous-managed conservation reserves and co-management of protected areas. In 1993, Peru ratified the ILO Convention 169 Concerning Indigenous Peoples in Independent Countries, an important international treaty on indigenous peoples' rights (see Box 12, Part 1, Chapter 6). ILO 169, which became part of national law in Peru in 1994, recognises indigenous rights to land and natural resources and the right of indigenous peoples to participate in decisions that affect them. It also commits governments to develop systematic actions to protect these rights.

The 1997 Law on Protected Areas maintains a largely protectionist focus in different protected area categories, except in community reserves where natural resources can be managed by local communities. Peruvian environmental law and protected area procedures require consultation with indigenous communities. Indigenous and local communities should be represented on protected area management committees so that they can participate in

policy development, planning, monitoring and evaluation in all protected areas where communities have legal or traditional title. As the former director of Peru's Protected Areas explained, "protected areas should not generate poverty or be indifferent to it."[56]

But in practice, protected area management and planning systems are still centralised and top-down. Participation of local communities is limited and co-management committees generally do not function effectively. Community participation often focuses on negotiation to mitigate the impacts of communities on protected areas, or consultations on specific issues, rather than providing an opportunity for participation in the management of protected areas. Local communities do not receive any benefits or share of revenues from tourism, although INRENA (the National Institute for Natural Resources) plans to address this issue.

There is a need to move towards co-management of protected areas involving real spaces for participation, in order to improve biodiversity conservation and local benefits. Although there are some projects in this direction supported by the government, they suffer from a lack of agreement on a common agenda with indigenous communities. Three projects supported by the GEF/World Bank are seeking to engage communities in protected area management, but in an incipient manner and as yet without results. Communities have participated in the development of legal norms like the protected area law through national organisations, but the option of management by indigenous communities has not been included in the way they would have liked. Indigenous peoples' vision of fully devolved management in accordance with their customary laws does not tally with the government's view of Community Reserves as areas of biodiversity conservation and sustainable use where restrictions and rules can still be imposed by the government.

The agendas of international NGOs, financed by international or home-country donors, have significant influence on Peruvian conservation policy and projects, but such NGOs do not consult with indigenous and local communities or national NGOs. These international organisations provide funding for conservation and influence the guidelines for developing projects to be financed. Given the limited levels of national funding, they end up directing national agendas on biodiversity, environment and poverty. Local communities in biodiversity-rich areas have very limited opportunity to participate in policy debates. Policymaking is centralised in Lima, often with little attention to the needs of rural people or understanding of local realities (see Section 9.3).

9.2. Mainstreaming biodiversity in development policies

Institutional mechanisms and constraints

CONAM is responsible for implementing Peru's NBSAP (Box 25) and related national strategies for native crops, biodiversity and gastronomy. A national law on the Conservation and Sustainable Use of Biological Resources was adopted in 1997 to implement the CBD, with a focus on biodiversity planning, conservation mechanisms, research and technology. National laws on access and benefit-sharing and protection of indigenous peoples' collective traditional knowledge have also been adopted.

Despite the number of national biodiversity policies and laws, sectoral ministries tend not to address biodiversity issues specifically, even if they administer productive natural resources (eg. fisheries, water, forests). Although CONAM—and in particular CONABID, the National Commission on Biodiversity which it chairs—is responsible for promoting cross-sectoral co-ordination of biodiversity issues, it has no executive powers and a very limited budget. It includes participation from different public institutions, indigenous peoples' representative organisations, universities and others. While it is a useful forum for debate on CBD issues and civil society involvement, it is not really fulfilling its role of cross-sectoral co-ordination partly because no-one takes up the results of its work in a binding way.

56 Gustavo Suarez de Freitas, pers. comm. at *Workshop on Coordination of Policies on Biodiversity and Poverty: Case studies and the Peru-Brazil Inter-Oceanic Highway*, hosted by IIED, Asociacion ANDES and CONAM (the National Commission for Environment), Lima, Peru, May 2005.

Box 25. Peru's NBSAP

Peru initiated a process to develop a national biodiversity strategy and action plan (NBSAP) in 1998, which involved national consultation and the development of regional strategies and priority documents as inputs to the overall NBSAP. The process involved a wide range of stakeholders. The strategies focused on identifying critical conservation areas, adding value to biodiversity, enhancing *in situ* and *ex situ* conservation, and mechanisms to ensure the NBSAP is taken into account in decision-making. The NBSAP recognises that the conservation and sustainable use of biodiversity are essential for overcoming poverty and meeting the MDGs, and that the poor are particularly dependent on ecosystems. Its priorities include ecosystem management and its incorporation into land use planning as a complementary approach to *in situ* conservation.

Although the NBSAP sought to be a continuous process, rather than just a document, its implementation has largely stalled due to lack of funding and political commitment. There is no political decision to promote implementation of the strategy; neither is there an obligation for sectoral departments to follow up the NBSAP. The issue of biodiversity has entered a few sectoral policies and initiatives, but this is largely due to the effort of the professionals participating in the NBSAP process, rather than any institutional policy. Furthermore, the GEF's requirement to have a final product within a specified period of time has prevented the process being internalised effectively by all stakeholders, especially public sector agencies, since this is a slow, time-consuming, complex and demanding process (Ruiz, 2001). Institutional tensions between the two national agencies responsible for co-ordinating biodiversity-related agreements (CONAM and INRENA) have also weakened the ability of joint efforts in their implementation (Ruiz, 2001).

CONAM and INRENA are the two agencies in charge of co-ordinating the implementation of multilateral environmental agreements (MEA) in Peru. They have proposed various national commissions or technical committees for MEA implementation, but these institutional structures are not given full recognition as the central spaces for MEA implementation, unlike when the Ministry of Foreign Affairs chaired such a commission (Ruiz, 2001). Both CONAM and INRENA have very limited financial resources and personnel and co-ordination meetings are often perceived as a "waste of time" among public institutions and other stakeholders (Ruiz, 2001). Other obstacles to MEA implementation are set out in Box 26.

Thus, while mechanisms exist for inter-departmental co-ordination, there is very little co-ordination between different ministries and any co-ordination is largely irrelevant for biodiversity and rural communities. It is very difficult to promote co-ordination between different ministries as it tends to threaten their quota of power. Often, the motives of resistance are individual and not necessarily due to sectoral or institutional policies. Only a clear political will can initiate a process of cross-sectoral co-ordination on environment and biodiversity issues. Currently, the only policy which is really co-ordinated between sectoral ministries is economic growth, particularly export promotion. The system of administration and use of natural resources is designed for the economy only—for corporate and industrial use—and not to support the needs of local users.

Capacity-building is needed at the national level to develop a culture of collaboration towards common goals and mechanisms for process facilitation, for example workshops to promote collaboration through "affection networks" (*talleres de redes afectivas*). Raising the profile of MEAs and their importance is also needed to promote wider participation of public agencies in their implementation. In particular, the Ministry of Finance needs to be targeted since it acts as a national planning agency and has the power to create incentives to implement MEAs, but rarely takes them into account in planning and budget allocation. Exploring the potential economic benefits of MEAs is critical to ensure attention by the Ministry of Finance and other stakeholders (Ruiz, 2001).

Peru's National Environment Agenda (2005-2007), led by CONAM, sought to identify national and regional environmental priorities through a cross-sectoral environmental planning instrument implemented by different sectors. The participatory planning process succeeded in incorporating environmental issues in regional development plans. Regional Environment Commissions were set up to develop and implement regional environment plans; review existing policies on environment, conservation and sustainable use of natural resources; and integrate social, economic and environmental objectives. These regional planning processes were more successful in

promoting sectoral integration than those at national level because the links between sectors are much more obvious at regional and local level. However, there was limited prioritisation of activities in the regional plans and scant funding for their implementation.

Box 26. Obstacles to MEA implementation in Peru

Peru does not lack regulations for biodiversity and the environment, but the challenge lies in their limited or partial implementation. Ruiz (2001) identifies the following obstacles to the implementation of MEAs, which are common to implementation of national laws in general:

a) Structural or underlying variables:

- Poverty and immediate subsistence needs of an important percentage of the population.
- Lack of basic education and awareness about the importance of the environment (at all levels, from schools to judicial magistrates and the productive sector).
- Corruption, particularly at the level of the judiciary.
- Perception among public institutions that biodiversity (as an integrating concept) is something new.
- Short-term state development policies.

b) Variables with a direct effect on implementation:

- Sectoral management of the environment and natural resources.
- Institutional weakness of environmental agencies (limited political weight, limited human and economic resources).
- No long-term national development strategy which incorporates the environment as a major and critical component.
- Weak incentives, sanctions and enforcement mechanisms.

While cross-sectoral links are clearer at local level, local communities are often "invisible" to local and regional governments. It is very difficult for them to get the government to listen when they seek support or wish to exercise a citizen's right. The system of local-regional-national government is not designed to include indigenous forms of organisation; elected indigenous representatives do not have real opportunities of representation in the system due to the prevailing institutional design.

The "de-structuring"[57] of local institutions, particularly amongst peasant farmers, also affects capacity to interact with government institutions. Communities usually need the support of third parties to do so. As ownership and use of communal land has been disbanded and replaced with cultivation of small individual plots, the economic and social cohesion and traditional institutions which allow exchanges, reciprocities and compensation have been lost. With the loss of traditional institutions and culture, poverty is advancing in the countryside. Thus, there is a need to strengthen the capacity of local communities to negotiate with government institutions (including by strengthening local institutions) and to build trust between different actors. There is currently very little trust between communities, government and other actors.

57 Destructuring involves gradual weakening and dissolution as power is taken away, cultures change, collective land is privatised etc. This social destructuring is a common trend in Peru.

Integrating biodiversity into agriculture policy

Agro-biodiversity is not addressed in the national agrarian policy (which is led by the Ministry of Agriculture). Furthermore, regional governments have not included agro-biodiversity issues in regional development plans. Agriculture policy is fundamentally export-oriented, which means that only crops considered promising for international markets are promoted. Industrial agriculture, commercial revenue and competitiveness are national priorities. This tends to neglect the diversity of native crops and associated traditional knowledge and culture. Instead, national agrarian policy has promoted specialisation in monoculture through "improved" seeds, intensive use of agro-chemicals, etc. In general, policies do not take traditional knowledge into account and therefore contribute to the erosion of biodiversity and the perpetuation of poverty.

Only recently, due to the demands of a growing alternative market, has a small window of opportunity begun to open. There has been an increase in the area under ecological and organic agriculture, and networks for organic agriculture have emerged. In 2004, the Ministry of Agriculture presented a new basis for the state agricultural policy with eight central axes, including the sustainable use of natural resources and the environment, and the need for collaboration with social actors.

Agro-biodiversity in Peru is associated with the traditional practices and knowledge of Andean and forest communities; relatively low production, productivity and market integration (with some exceptions); and high poverty levels (economic poverty). Specific problems in these areas include rights over land and communities which lack full titles. Farmers' interest in and options for continuing to conserve and sustainably use agro-biodiversity *in situ* are eroding for various reasons. The spread of Western markets and agriculture, cultural change and development in rural areas are contributing to a migration of young people to the cities in search of better opportunities. This undermines the transmission to future generations of traditional knowledge and practices that conserve agro-biodiversity.

A process is needed to integrate agro-biodiversity into Peru's various policies and laws, including incentives to enable continued conservation and sustainable use of agro-biodiversity *in situ*. Farmers should be given the opportunity to develop in the way they feel is most appropriate for them and the tools to decide which development pathway to take. However, education systems—schools and agricultural courses at university—do not currently address biodiversity or agro-biodiversity at any level. Nor do they recognise cultural diversity and associated development needs. Rather than strengthening traditional values and knowledge, they promote only Western science and values, thus accelerating cultural erosion (including through racism). Without culture, traditional knowledge and agro-biodiversity will disappear. Recently, however, some schools have started to teach native languages.

In the last two decades there have been targeted efforts to strengthen the capacity of farmers for *in situ* conservation of genetic resources and traditional knowledge, mainly promoted by NGOs and international centres like CIP (the International Potato Centre, a CGIAR centre based in Lima) and IPGRI (now Biodiversity International). The GEF is funding a project on *In situ Conservation of Native Crops and their Forest Relatives*, co-ordinated by the Institute for Peruvian Amazon Studies (IIAP) and the Ministry of Agriculture. The project aims to strengthen the conditions for *in situ* conservation of agro-biodiversity in and around farmers' fields, and improve the food security and health of excluded rural populations which are repositories of a rich cultural and biological diversity of national and global interest. It seeks to promote respect for farmers and their traditional organisations as conservers of biodiversity and central actors in its management. The project supports community-based conservation of a number of important native food varieties in the Andes and Amazon regions and protection of associated traditional knowledge. It also aims to scale-up support for agro-biodiversity in the Ministry of Agriculture, establish Special Areas of Agro-Biodiversity Management and make regional and local government policies more supportive of agro-biodiversity and peasant farmers. It includes capacity and institution-building at farmer level to improve their ability to negotiate with government authorities.

Integrating biodiversity into trade policy

The National Plan for Competition includes a number of provisions on environment and biodiversity. It identifies the need to:

- Integrate national environment policy with economic, social, cultural and land use planning policy.
- Institutionalise environmental management in the public and private sectors.
- Protect biodiversity, facilitate sustainable use of natural resources and ensure environmental protection, which should improve quality of life especially for the most vulnerable people.
- Recognise and defend traditional knowledge and indigenous cultures.

The inclusion of environmental objectives was promoted by the US partner agency. While this is an important step, the strategy does not specifically address the needs of local communities, which are seen as providers of raw materials, and which face a distinct set of challenges in developing commercial initiatives or enterprises. For example, public registration of community-based enterprises is not permitted by Peruvian law.

UNCTAD's[58] Biotrade Initiative in Peru aims to promote investment and trade in native biodiversity products, in accordance with the objectives of the CBD. It has brought together national trade and biodiversity institutions: CONAM (Chair of the Biotrade Committee), the Commission for Export Promotion (Prompex, Technical Secretariat), the Ministry for External Relations, the National Institute for Natural Resources (INRENA), and the Technical Secretariat for Indigenous Affairs. Bio-trade supports local economic development through value addition to biodiversity products which are competitive in national and international markets. It applies both social equity and economic criteria. It also supports the establishment of strategic alliances for trade promotion. However, it does not specifically seek to support the poorest groups in society. Some national experts and NGOs see trade promotion, as opposed to resource tenure issues, as the solution to addressing both biodiversity and poverty objectives, since indigenous rights are already well recognised in Peruvian law. However, this perspective is not necessarily shared by local NGOs and CBOs, which tend to emphasise the need to secure resource rights and access to local markets.

Despite the above initiatives, the overall thrust of trade policy in Peru does not consider biodiversity or related livelihoods and poses a significant threat to them. This is evident in the recently signed US-Peru Trade Promotion Agreement (PTPA) which Peru ratified in 2006. The PTPA was developed following a dozen negotiating rounds and various complementary side meetings. Throughout this process, Peru's native peoples were never consulted, nor were they invited to the renowned "side tables" in which other institutions and associations took part. The negotiating rounds were conducted behind closed doors, and a number of organisations supporting farmers' interests withdrew once it became apparent that their concerns were not being addressed. Furthermore, the influence of corporations is evident in the resulting agreement (Siegele *et al*., 2006).

The PTPA is a "TRIPS-Plus" agreement because its intellectual property rights provisions go beyond those of the WTO's TRIPS agreement (see Part1, Section 6.4). It allows for the patenting of plants, and requires Peru to accede to the 1991 UPOV Convention, which limits the rights of small farmers to trade their own seed. The PTPA does not require patent applicants to disclose the origin of plants and their components during the patenting process, or obtain authorisation before using traditional knowledge. Thus, its provisions also conflict with Andean Community and Peruvian regulations on intellectual property rights, ABS and traditional knowledge protection. The PTPA is also likely to exacerbate the existing problems of poverty and inequality for Peru's small farmers and undermine regional efforts around sustainable development (Oxfam America, 2007).

The failure of the PTPA to address traditional knowledge and the concerns of indigenous and local communities has been emphasised by the International Indigenous Forum on Biodiversity (IIFB): "Free trade agreements do not recognise the rights of indigenous peoples, nor do they protect our traditional knowledge. Furthermore, they promote the interests of the market above collective rights." [59] As was illustrated by IIFB, small-scale farming is the primary source of the economic, social and cultural wellbeing of indigenous and local community populations in developing countries. The traditional knowledge inherent in the saving, trading, breeding and re-planting of

58 United Nations Conference on Trade and Development.

59 IIFB opening statement at the fourth meeting of the Convention on Biological Diversity Ad Hoc Open-ended Working Group on Access and Benefit Sharing (Granada, 30 January-3 February 2006).

seed from one year to the next is integral to the continuing survival of these communities and the maintenance of biodiversity. Promoting a bilateral trading system which focuses on providing incentives to commercial breeders and the biotechnology industry therefore poses a serious threat to the livelihoods of small-scale farmers.

Furthermore, following the US-PTPA the Peruvian Government has taken a pro-GM stance, as evident from its adoption of the Law to Promote the Use of Modern Biotechnology in Peru. The FTA (foreign trade agreement) itself has undermined Peru's ability to regulate trade in GMOs offered under the CBD's Biosafety Protocol (see Box 27). According to the Peruvian authority responsible for regulating biotechnology, the drafting of this new law was heavily influenced by a Peruvian scientist with close ties to Monsanto (Siegele *et al.*, 2006). Opening the door to GMOs brings the risk of contamination of traditional varieties and of small farmers losing out to powerful multi-national agri-business. Lobbying by concerned indigenous communities and NGOs in Cusco (who argued that GMOs would affect the region's unique biodiversity and culture, and hence tourism), supported by an indigenous MP for Cusco, resulted in the Cusco government introducing a Regional Order declaring Cusco a GM-free zone. Other regional governments in Peru are now considering doing the same. In addition, NGOs are calling for similar regional orders for the establishment of agro-biodiversity areas that would protect the traditional farming system from the effects of the pro-industry trade reforms which are being introduced to implement the FTA.

Box 27. The US-Peru FTA sanitary and phytosanitary provisions and implications for GMOs

The Sanitary and Phytosanitary (SPS) Agreement is the WTO Agreement most directly related to trade in genetically modified organisms (GMOs). Its aim is to ensure hygiene/safety standards are met in food exports/imports. The Cartagena Protocol provides for a number of trade-related measures, and WTO rules apply where the protocol affects international trade. There is significant potential for conflict here (MacKenzie *et al*., 2003). The SPS provisions in foreign trade agreements (FTAs) rarely go beyond WTO SPS commitments. Most FTAs include a reference to each party's rights and obligations under the WTO SPS agreement, and some have established standing committees to consult on and resolve SPS problems on an ongoing basis. In some agreements, exceptional rules go beyond WTO provisions, but are relegated to limited product-specific provisions (Rudloff and Simons, 2004; Becker, 2006).

In the US-Peru TPA, the chapter on SPS measures (Chapter 6) affirms the rights and obligations of both parties under the WTO's SPS Agreement. The TPA requires that a Standing Committee made up of members from both parties be formed to consider SPS matters, including consultation with the other party on country positions in the WTO SPS Committee. Agreement in the Standing Committee is by consensus. In addition to the possibility of the dominant party circumventing the more visible WTO dispute settlement process here, there is potential for the US to be privy to and influence Peru's negotiating positions in the WTO through this Standing Committee.

The TPA includes letters of exchange on SPS issues from both the United States and Peru. The letters from the governments of Peru and the United States (1) confirm that Peru will continue to recognise the US meat and poultry inspection system as equivalent to its own; (2) confirm that the certification statements from the US inspection system meet Peru's import requirements; (3) recognise that measures taken by the US regarding BSE 23 and avian influenza meet WTO guidelines; and (4) confirm that Peru has taken steps to eliminate restrictions on US rice exports to Peru. Major trade associations representing the US livestock sectors consider this a significant precedent for other FTA negotiations and hope the SPS commitments made by Peru will set a standard for all future US FTAs (USTIC, 2006). To the extent that US meat and poultry are fed GM products and US rice is GM, with this side letter, Peru appears to have signed over certain of its rights to regulate the trade in GMOs offered under the Biosafety Protocol.

Source: Linda Siegele pers comm., Foundation for International Environmental Law and Development

Integrating biodiversity into infrastructure developments: the impacts of the Inter-Oceanic Highway

Transport policy and projects can have serious impacts on biodiversity, culture and the livelihoods of the poorest groups, but they often neglect to ensure civil society participation. In 2005 the construction of a trans-oceanic highway between Brazil and Peru (Atlantic to Pacific) was agreed between the governments of nine Latin American countries, without civil society involvement. In Peru, the route passes through biodiversity-rich forests and indigenous reserves in the Amazon, and the territories of Andean communities which are also centres of global crop diversity (many of which are not even recorded on any maps). The proposed route cuts right through Vilcanota—a sacred Andean mountain valley, centre of native crop diversity and home to remote Q'eros communities—where the NGO ANDES is working with the Q'eros to establish a Spiritual Park (or Community Conserved Area; see below for more details).

In May 2005, road construction and widening was about to start even though there had been only a minimal EIA and no public consultation with residents along the proposed route. An EIA had been done to assess the immediate impacts of the road, without considering the longer term ecological, social or cultural impacts. Although the national economy and certain areas and groups might benefit from improved trade and market access, the negative impacts in more ecologically and cultural sensitive areas along the route could be very significant. For example, opening up forests for logging, contamination from transport of GMOs, influx of traders, prostitution etc.

A workshop convened by CONAM, ANDES and IIED in May 2005 brought together the Transport Ministry, the environment community and indigenous representatives to discuss the construction of the Inter-Oceanic Highway. ANDES and indigenous representatives called for particular efforts to avoid impacts on the Vilcanota Spiritual Park (a sacred site), recommending that:

- Environmental impacts should be fully evaluated; and in this case due to the presence of a Natural Sacred Site, social and cultural impact assessments should be also carried out.
- The CBD's Akwe:Kon guidelines should be applied, which call for cultural, environmental and social impact assessments of proposed developments on sacred sites, lands and waters of indigenous and local communities.
- Local communities should participate directly in the proceedings.

As a result of the workshop, the Transport Ministry agreed to delay the start of road construction to allow for consultations to be held along the designated route, including in the Andean area of Cusco. Nevertheless, the route remains largely unchanged and still passes through the Vilaconota Spiritual Park, still posing a serious threat to an area of special religious and historical importance for Andean peoples, which also holds nationally and globally unique cultural and biological diversity.

Integrating biodiversity into poverty reduction policy

Levels of rural poverty in Peru are persistently high, whether measured according to income alone or various other aspects of poverty. Over 50% of the population has a history of deprivation, marginalisation and exclusion. Indigenous people are amongst the poorest in Peru and depend directly on biodiversity and traditional knowledge for most or all of their needs. Thus, biodiversity and poverty reduction are fundamentally interlinked and commitments under the CBD and the MDGs need to be addressed together.

The National Environment Agenda to 2007, Regional Environment Agendas and NBSAP all recognise the need to identify the close links between biodiversity and poverty alleviation and create wealth based on biodiversity resources. However, although both objectives have been prioritised in the design of national policies, they are still addressed separately and without synergies. Understanding of biodiversity-poverty linkages is often limited amongst the relevant government institutions.

Peru's poverty reduction strategy only addresses natural resources in terms of prevention of natural disasters, such as drought and frost. The rural development strategy includes the sustainable use and conservation of natural

resources and protection of environmental and cultural heritage as an objective. But in general, biodiversity and natural resource management are not addressed in poverty reduction policies, either in the diagnostic or proposed solutions. Rural zones are not well represented in the areas sampled for poverty assessment, and environmental factors, including biodiversity on which rural populations depend, are not factored into the analysis. Thus, national poverty assessments have little or no relevance for local organisations and areas which support Peru's mega biological and cultural diversity.

Poverty reduction is a national goal that all ministries should take into account, but no one ministry really has responsibility for achieving concrete goals/targets. Despite being established by the previous government as the highest priority, there are few results to show. Most social development programmes do not reach the extreme poor who live mainly in rural areas. These communities live off the natural resources at their disposal on their farms and communal lands, for both food and health. Poverty reduction programmes for nutrition and education are not participatory with respect to communities defining what they need and how they should receive support.

Since 2001, the National Platform for the Fight against Poverty has provided a forum for building a common agenda and proposals with civil society, the church and donors. Its aim is to institutionalise a new form of state administration for social policies which prioritises dialogue and agreement with diverse sectors of society. About 150 platforms were established in the provinces and districts of all regions. The resulting action plan for combating poverty prioritises decentralisation, poverty reduction and state reform. However, being based on consensus objectives and without an external driver, the plan is not progressing.

The definition of poverty (or quality of life) in poverty reduction policy is often based on conventional measures of poverty, such as income or consumption levels. These overlook a whole set of deprivations, such as lack of political and civil rights, accountable governance, food security, cultural erosion, etc. While the MDGs have gone beyond income to include hunger, education and health, they focus primarily on easily measurable outcomes. The Peruvian state is increasingly recognising poverty as a multi-dimensional issue, but is still not addressing multi-cultural elements, traditional knowledge and biodiversity in the diagnosis or the response. Concepts of poverty and development are cultural constructs. Measures of poverty and proposed solutions are largely defined by external experts while poor groups are not involved in decision-making. However, local people know best about the deprivations that matter most to them and the complex interconnected components of poverty that afflict them in their unique local context (Montenegro de Wit *et al*., 2005). Thus, in order to develop effective poverty alleviation strategies, the local context and associated deprivations need to be reflected in definitions and measures of poverty. These can vary widely depending on, for example, the level of dependence on natural resources and non-monetary markets, cultural values (and associated concepts of well-being), political context, history, etc.

A Quechua poverty reduction strategy based on biodiversity

The NGO Asociacion ANDES conducted a participatory study with indigenous Quechua communities in two areas in the Andes classified as having "extreme poverty": i) Lares, a barter market and two neighbouring Quechua communities; and ii) Vilcanota, a remote sacred mountain area also inhabited by traditional Q'eros communities (Association ANDES, 2005). The study had two main objectives (Montenegro de Wit *et al*., 2005):

1. To involve local groups defined as "poor", whose livelihoods depend on biodiversity, in defining and measuring poverty.

2. To work with local authorities and the local population in using the results to develop local poverty alleviation strategies.

Both study areas are rich in bio-cultural diversity, where traditional knowledge, innovations and practices conserve biodiversity and support local development needs. The Vilcanota area is a globally unique centre of origin and diversity of tubers, grains, roots and fruit trees native to the Andes and their wild relatives (eg. potato, prickly pear, *kiwicha*, *yacon*). The communities in Vilcanota are establishing a Spiritual Park (a type of Community Conserved Area), with support from ANDES.

The participatory action-research methodology used by ANDES requires the consent of communities before initiating the proposed research, and engages communities centrally in decision-making—from defining the research objectives and questions, to analysing the findings. The study groups are made up of, and facilitated by, community members themselves, the aim being to build local capacity and ownership of the process and strengthen local self-governance. For this study, the groups included the community members considered to be poor and beneficiaries of government social assistance programmes.

The results show that local communities do not depend on money to fulfil their basic needs, except for a few non-traditional food items and matches. Average spending was just half a dollar a day per family. The study highlighted a high and direct dependence on biodiversity as a mechanism for preventing poverty and meeting basic needs. Of particular importance was the Lares barter market; people who do not have enough money to buy food rely on weekly visits to the barter market to supplement the food they produce. Communities from different agro-ecological zones exchange a wide array of agricultural products and medicinal plants. High altitude produce (meat and potatoes) is traded for mid-altitude (eg. corn, quinoa, cabbage, beans), and low altitude produce (fruit and vegetables). Exchanges are based on reciprocity principles and no money is involved. In addition to supporting the food and health needs of the poorest people, the barter market maintains traditional agriculture and associated biodiversity, ecosystem services and cultural/spiritual capital and ensures local control over food systems and markets. There was unanimous agreement that without the barter market there would be increased poverty and malnutrition, and that people would have to leave their traditional agricultural lifestyles in search of work.

Lack of money was just one of many deprivations identified, along with lack of land, livestock, education, knowledge, social harmony and community support. Paying tribute to Mother Earth and praying to God were also identified as basic necessities. This suggests that "spiritual capital" is highly valued in Andean society and that any locally constructed definition of poverty should include not only social and natural capital, but also spiritual capital. Thus, definitions of poverty that focus on material well-being alone are inevitably incomplete.

The study proposed the following local definition of poverty: erosion of the *Pachamama* (Mother Earth), which includes:

- Loss of biological diversity and ecosystem goods and services.
- Loss of cultural diversity, including knowledge, practices, innovations and associated rights.

The contribution of the barter market to alleviating poverty in the Lares valley provides valuable lessons for the formulation of locally-devised poverty alleviation concepts and strategies. It emphasises the importance of:
Generating local employment.

- Conservation and sustainable use of biodiversity and associated natural, social and cultural capital.
- Providing food security.
- Maintaining ecosystem goods and services.
- Local control over production and consumption.

In terms of strategies for reducing poverty in the Andes, the study identified the need to create Community Conserved Areas that:

1) *Maintain the holistic and interconnected nature of Andean landscapes* and promote the sustainable development of the mountain ecosystem by: implementing conservation strategies and promoting the sustainable use of biodiversity and ecosystem goods and services; strengthening Andean knowledge, practices and innovations and putting them to use in the creation of a local economy; and developing poverty alleviation strategies based on local definitions of poverty and wellbeing.

2) *Prioritise the generation of a local economy* based on the sustainable use of biodiversity, with particular emphasis on food production, among other livelihood necessities.

3) *Recognise and reinforce traditional institutions* and local juridical systems in order to establish a system of natural resource governance—with a particular focus on biodiversity conservation—that is equitable and inclusive.

The communities in the Vilcanota area identified the need to continue the development of a CCA—or Spiritual Park—with additional emphasis on:

- Protecting the spiritual capital of Andean peoples and its influence on the character of the economy (eg. values of reciprocity).

- Maintaining the continuity of the cultural practices and values of the Quechua peoples associated with the conservation and sustainable use of biodiversity, from gene to ecosystem level.

- Drawing on emerging conservation strategies of the IUCN, CBD, FAO, and UNESCO (of relevance to CCAs).

Decentralising biodiversity management: The Andean Potato Park

The Andean Potato Park is a Community Conserved Area near Pisac, Cusco, set up by six indigenous Quechua communities with support from Asociacion ANDES.[60] It provides a good example of an approach to biodiversity conservation which also sustains local livelihoods through decentralised management; and of how local communities "mainstream" biodiversity across livelihoods and local economies. The park is being established as an Indigenous Bio-cultural Heritage Area whose aims are: the conservation and sustainable development of agro-biodiversity and the mountain agricultural landscape; alleviation of poverty and strengthening of local livelihoods; and safeguarding the historic continuity of Quechua culture and collective indigenous knowledge and rights. "Indigenous bio-cultural heritage" is an holistic concept which encompasses a range of traditional resources, both tangible and intangible, including land, biogenetic resources, traditional knowledge, customary laws, spiritual values and landscapes, which are passed down from previous generations, conferring rights to current ones (Argumedo and Pimbert, 2006).

The potato, one of the world's major food crops, has been protected for centuries by the local food systems of Quechua peoples. The park is in an area of tremendous diversity of native potato varieties and other native Andean crops, where communities continue to enhance and conserve biodiversity that is important for food and agriculture. By farming traditional crop varieties and animal breeds, a high level of genetic diversity is maintained which is well suited to their complex and risk-prone environment. Many plots contain more than 100 different varieties of potato, and the park area contains over 400 varieties of the approximately 1,300 different varieties found in the Cusco region (Argumedo and Pimbert, 2005).

Although its primary focus is the conservation of agro-biodiversity, through sustainable management of the landscape the Potato Park also conserves wild biodiversity, including wild relatives of crops, wild fauna and ecosystem services. The Cusco region has more wild potato species than anywhere in the world, and the Potato Park provides a critical genetic reservoir for wild food species. It also hosts a rich variety of endemic plant and animal species. Threatened or endangered wild mammals in the area include the Andean fox, weasel, *vizcacha* and puma, while the most notable local bird species is the condor, and there are also unique shrubs (Argumedo and Pimbert, 2005).

Unlike some conservation projects, the Potato Park is protecting not only the natural environment but also the socio-cultural systems and local food systems that created the landscape in the first place. Traditional agriculture in the region has long been based on ecosystem approaches that nurture the diversity of domesticated and wild

60 The Potato Park has been supported for a number of years by the IIED Project on Sustaining Local Food Systems and Agro-biodiversity funded by DGIS (the Dutch Ministry of Foreign Affairs), and also more recently by the IIED project on Protecting Traditional Knowledge and Customary Law (funded by the International Development Research Centre, IDRC, and DGIS).

food crops, the biological systems that support production and the ecosystem functions of surrounding landscapes (eg. maintaining water and wildlife habitats). Andean agricultural systems are based on ecological, productive and social principles which have at their core a profound respect for Mother Earth (*Pachamama*) and reverence for the mountain gods (*Apus*). Cultural beliefs and practices such as sacred groves have played a crucial role in conserving biodiversity in the region. The people's indigenous knowledge is rich in information, values and practices relating to a diversity of local biological resources and landscapes (Argumedo and Pimbert, 2005).

The Potato Park shows that communities are capable of conserving important biodiversity when emphasis is placed on decentralised governance, farmer participation, livelihoods, land/resource rights and culture as the basis for local adaptive management (Box 28). By using a highly participatory action-research approach to establish the Potato Park, ANDES has ensured strong local ownership. It plans to phase out its support to a minimal level in the next one or two years. The Association of Potato Park Communities, which includes the traditional leader of each of the communities, along with representatives of local residents, co-operatives, traditional authorities etc., is responsible for running the park. Each community is also represented on the governing board of the NGO ANDES. Economic activities are central to the initiative, and are based on Andean economic principles and institutions that promote sustainability and equity (as opposed to Western norms).

While support from ANDES will continue to be important (eg. to combat external threats such as transgenic crops), the management costs of this decentralised conservation model are likely to be much lower than for conventional protected areas, certainly in the longer term. The impact and sustainability of such community-based approaches would be even greater if they could count on real support from the Peruvian government and the international community, commensurate with their contribution to national and global conservation objectives. The Potato Park model, for example, is not supported under Peru's conservation or protected area policy, while at the same time being threatened by various policies on agriculture, trade, education, natural resources and so on.

Box 28. The Potato Park Community Conserved Area: approach and activities

The Potato Park communities were under feudal farming systems until the 1970s when new legislation enabled them to become landowners. Having registered as an Association of Communities of the Potato Park, they joined their lands together and obtained collective land title. This provided the basis for reviving collective resource management systems, traditional institutions and cultural values in this beautiful Andean landscape.

When ANDES started to work in the area there were conflicts occurring among the six communities. ANDES brought the communities together around the potato, an important resource on which they all depend and a symbol of their shared cultural identity. The communities' cultural and spiritual values and practices had been weakened by years of Spanish colonisation, but were retained to some extent in practice and in memory. Rather than imposing an external conservation system, ANDES worked closely with the communities to strengthen their own traditional institutions and values for NRM. Since the mid-1990s, ANDES has worked with community "technicians" who have played a leading role in designing and facilitating action-research processes to strengthen collective resource management. This has involved local learning (or study) groups, inter-community workshops, and setting up local groups (eg. women's video and gastronomy groups). ANDES staff do not participate directly in the study groups, but assist community technicians to plan study groups and analyse the findings. This highly participatory approach has generated a clear sense of pride amongst the community technicians in what they consider to be *their* park.

From the beginning, ANDES has made sure that at each stage the communities were able to say whether they wanted to slow down or not, and whether they were happy with the process. In the end the decisions about what activities to pursue and prioritise were made by the communities themselves. ANDES and IIED arranged training for community members in the facilitation and technical skills needed for collective deliberation, planning, analysis and action. It is evident from the successes achieved so far that people are putting their new skills into practice.

With support from ANDES, the communities are developing a number of economic activities, eg. packaging and local sale of medicinal plants; sale of organic "nutraceutical" potatoes to supermarkets; a restaurant specialising in traditional recipes and native varieties; and small scale eco-tourism. They have also registered a collective trademark for the Potato Park products, and established a communal trust fund into which a percentage of the profits made is being channelled. In addition, the communities have signed an agreement with the International Potato Centre (CIP) for the return of potato varieties taken from them in the 1960s (many of which have since been lost from the area due to genetic erosion), and for a share of the revenues derived by CIP from past use of these potatoes. The CIP will return germ-free potatoes and part of the funds will be used to establish potato storage facilities. It has also agreed not to allow any potatoes from the park to be patented in order to safeguard the rights of communities over their heritage. This is the first ever agreement which allows local communities to access genetic resources held *ex situ*, as opposed to only providing external access to community resources as per the CBD's access and benefit-sharing model. Hence it provides "reciprocal" access to genetic resources. The return of lost germplasm to communities will strengthen biodiversity, livelihoods and cultural values (eg. by reviving rituals and traditional recipes associated with the returned traditional varieties). The communities are also developing an Inter-Community Agreement for Equitable Benefit-Sharing to ensure fair distribution of revenues from the CIP agreement and other sources, prevent conflicts, and ensure the returned potatoes and revenues are used in accordance with Quechua customary values which promote ecological sustainability and social equity.

All the activities in the park are being guided by three key Andean customary law principles which are fairly well documented in anthropological literature:

- *Reciprocity:* what is received has to be given back in equal measure. It encompasses the principle of equity, and provides the basis for negotiation and exchange between humans, and also with mountain gods, animals etc.
- *Duality:* everything has an opposite which complements it; behaviour cannot be individualistic; and different systems or paradigms can be accepted.
- *Equilibrium:* refers to balance and harmony, in both nature and society, eg. respect for the *Pachamama* and mountain gods; and resolving conflicts to restore social harmony.

This emphasis on Andean legal and economic norms as opposed to Western norms aims to ensure that the communities can take advantage of various economic opportunities without losing their traditional values of respect for nature and social equity.

The Potato Park approach also emphasises the use of indigenous knowledge and strengthening local knowledge systems to support local livelihoods and resource management. It promotes sharing of information and practices between farmers and communities, and use of traditional research methods as well as contemporary participatory methods. A community register of biodiversity and knowledge has been set up for this purpose and for protecting community rights to their knowledge and genetic resources from biopiracy. It uses a visual database which combines the ancient *Kipus* information system with modern open source software.

Sources: Argumedo and Pimbert, 2005; Protecting Community Rights over Traditional Knowledge. Research Planning workshop, Cusco, Peru, May 2005.

9.3. Policymaking and implementation processes

Peru's diverse indigenous groups and peasant farmers play a valuable role in conserving globally, nationally and locally important biodiversity—native crops and livestock breeds as well as their wild relatives and fauna. Indigenous peoples have important traditional knowledge about the uses and sustainable management of ecosystems, species and genetic diversity, which provides incalculable value for Peru's biodiversity (see Box 29). They also depend heavily on biodiversity resources for agriculture, agro-forestry, forestry, hunting, NTFPs, income, ecosystem services etc. Paradoxically these groups, which live in areas rich in natural resources, have traditionally been marginalised by the country's sectoral policies and tend to be the households defined as living in extreme poverty.

Box 29. Local conservers and creators of biodiversity in Peru

In the Sierra (High Andes), indigenous and *campesino* communities have conserved and domesticated agro-biodiversity (Andean tubers, grains and cereals) and camelids at altitudes of over 4,000 metres. They have a wealth of knowledge about the traditional management of agro-ecosystems.

On the coast, fishing communities and artisanal seafood collectors are rich depositories of traditional knowledge. Agro-fishery production in the 53 coastal valleys is in the hands of small and medium farmers.

In the Amazon forest, indigenous and riparian communities have developed knowledge of ecosystems and species which has been transmitted from generation to generation. This constitutes cultural heritage and includes traditional knowledge of medicinal plants, agriculture and ecosystem management of enormous importance for the sustainable development of Peru.

Policy is made in Lima and looks towards the exterior rather than the interior of the country, thus overlooking peoples from the Andean and Amazonian communities. How can these diverse cultures be made more visible?

The development of public policies has become more inclusive of civil society in recent years, particularly in the environment sector. Indigenous organisations have become better organised and more active at national level since the 1990s, with the rise in oil and mining exploration on their territories, particular in the Amazon. However, Andean communities are less well represented at national level, and indigenous organisations are often divided by internal political struggles (Tobin and Swiderska, 2001). Furthermore, despite having gained a stronger voice, the influence of indigenous groups is still marginal in national policy processes. National environment NGOs based in Lima, some of which play a role in advising the government on policy, tend to have greater influence, even though they are not always very well informed about local realities and priorities.

Policy and law in general is applied very rigidly. For example, if a particular situation is not provided for by the law, officials often prefer to say "no" in order to avoid risking their jobs. They have no incentives to help address people's problems quickly and effectively. In rural areas with rich biodiversity and traditional culture, the government is notoriously absent. The lack of institutionalisation means that in general policies and laws are not applied. As a result, around 70% of the country is governed by a system of informal arrangements. In these areas, the role of government institutions should be to facilitate development rather than trying to direct or manage it.

Peru's great cultural and biological diversity can only be supported through approaches and instruments which are flexible and adaptable to different local, regional and national situations. A flexible approach should be based on general principles which are developed collaboratively from the local level. The ongoing decentralisation process which aims to transfer decision-making power and resources to the regions and macro-regions should bring opportunities for enhancing community participation in governance. The laws on decentralisation state that poverty reduction is the responsibility of the state, regional and municipal governments. Poverty reduction programmes are being transferred to the regions and discussions are underway on how to transfer decision-

making for allocating rights over natural resources and their administration. However, the decentralisation process is moving slowly and as yet without results.

9.4. Conclusions and recommendations

Decentralising institutional systems

The current model of unco-ordinated sectoral authorities which are centralised in Lima does not contribute to slowing biodiversity loss or achieving the Millennium Development Goals. The discussions on reform of the state should consider multiple options which could address the need to sustain both biological and cultural diversity. Evidence appears to demonstrate that the closer the decision-making power to those who know about biodiversity and who use and conserve it, the greater the chances of success in the long term. In order to contribute more concertedly to the CBD and MDGs, there is a need to design an institutional system that puts the conservation and sustainable use of biodiversity primarily in the hands of rural communities, and allows communities to take a lead in conserving agro-biodiversity. As a minimum, the effectiveness of such a system should be tested with one pilot in the Andes, one in the Amazon and one in a coastal area.

Redefining poverty

The validity of existing definitions of poverty should be re-assessed and a new definition proposed. In particular, wider understanding and recognition are needed of the role of biodiversity in poverty alleviation. There is a need to develop a national concept of poverty that takes into account the management of biodiversity by rural communities to satisfy their basic needs, and other elements not usually associated with basic needs, such as culture. National definitions of poverty and strategies for its reduction need to be developed through a combination of top-down and bottom-up processes, so that they incorporate local and multi-cultural perspectives of poverty, as well as Western economic theories.

Improving biodiversity-poverty linkages

The following recommendations were identified:

- Improve co-ordination and communication between policies and authorities at local, regional and national level.
- Provide financial support for local projects and development strategies based on definitions of poverty determined by the poor themselves.
- Respect and protect the civil and political rights of the poorest sectors of society, reduce existing discrimination and promote equity.
- Support existing local livelihood systems that depend on biodiversity (for example, barter markets, CCAs).
- Support measures to secure property rights for those whose livelihoods depend on biodiversity.
- Provide services to “invisible” sectors of society (ie. rural/remote) with guaranteed access to all community members and special standards for women and children in the poorest sectors.

9.5. Suggestions for future action-research

The section above highlighted the need to test the effectiveness of decentralised institutional systems for biodiversity management, and support local definitions and strategies for poverty reduction. In addition, a focus on agro-biodiversity might best lend itself to addressing biodiversity, poverty and livelihoods. The following key themes for action-research were highlighted:

1) *Alternative markets for agro-biodiversity*: There are diverse types of markets for agro-biodiversity in Peru, including barter/reciprocal exchange of seeds, exchanges between communities, and community seed fairs. Two issues could be explored:

- The motivation for conserving agro-biodiversity amongst peasant farmers. These might include cultural, religious, nutritional, economic, scientific (indigenous or empirical) or other reasons (eg. "affection" or preference for native varieties may be a key factor which has enabled the survival of native crop conservation processes).

- The characteristics of different types of market for agro-biodiversity at local, regional, national and international levels. Do they lead to reduction or conservation of agro-biodiversity? To what extent do products derived from agro-biodiversity satisfy the expectations of potential consumers? Is it possible to build a global alternative market from the bottom-up? Would the market be prepared to pay the costs of recovery and maintenance of agro-biodiversity?

2) *New types of agro-biodiversity "protected areas"*: A range of options could be examined for establishing new types of protected area. Such areas would be in accordance with both the MDGs and the CBD, as well as the FAO Treaty on Plant Genetic Resources for Food and Agriculture, and would be managed by rural communities. For example the Andean-Amazonian area of Cusco, which is a micro-centre of genetic origin of potatoes and other important food crops, could be proposed for declaration as a Reserved Zone for Plant Genetic Resources for Food and Agriculture. Such a proposal would support existing CCA initiatives such as the Potato Park and conservation activities on plant genetic resources for food and agriculture (PGRFA) at Cusco University and other institutions. Another type of CCA could be proposed for protecting cultural or spiritual sites, like the Vilcanota Spiritual Park. As a first step, possible cases could be compiled.

Declaring a "reserved zone for PGRFA" does not imply restricting the use of resources, but promoting their sustainable use by communities. These zones could also be used for agro-tourism and "home-stay" tourism to generate revenue for communities, and this might also encourage the Peruvian government to provide funding for the conservation of such areas. They should also address the issue of systems for fair and equitable sharing of the benefits arising from access to genetic resources and protection of traditional knowledge, innovations and practices. The participatory action-research approach developed by ANDES could be used to establish similar CCAs in the Peruvian Andes and more widely.

PART 3
CONCLUSIONS AND WAYS FORWARD

CHAPTER 10. CONCLUSIONS

Over the last century or more, control of biodiversity has been progressively centralised in colonial rulers, national governments and international conservation institutions, and removed from local institutions and management. While national protected areas and conservation regulations have undoubtedly helped to conserve biodiversity, the removal of local control and rights based on the assumption that local people are a threat to biodiversity has also alienated many of these people and removed their stake in sustaining the resource.

In Tanzania for example, centralised control over wildlife and forests has removed incentives for local people to conserve biodiversity and resulted in widespread poaching. Furthermore, conservation policy has focused largely on protecting globally threatened species and habitats, while the livelihood needs and conservation priorities of local people have often been overlooked. As this report amply shows, communities in biodiversity rich areas are heavily dependent on biodiversity for livelihoods and wellbeing (including cultural and spiritual). Strict protected areas and coercive conservation tactics, in particular, have been associated with increased hardship for poor communities.

The last two decades have seen growing recognition that local communities should not be expected to bear the costs of conservation and that more inclusive and equitable approaches—such as community-based conservation and co-management of protected areas—are needed to improve livelihoods and conservation outcomes. With poverty reduction and the MDGs high on the political agenda, conservation organisations have started to seek ways in which people's needs can also be addressed. Local people have also started to be seen as allies offering important skills, while recognition has grown that the real drivers of biodiversity loss often stem from "perverse" national policies and distant markets, rather than local people.

As the Millennium Ecosystem Assessment (MA) found, biodiversity and ecosystem services are being degraded faster than at any other time in human history, and will only be conserved once they become "a mainstream concern of production sectors". Prior to that, the Rio Earth Summit (1992) and the WSSD (2002) provided a clear mandate for linking biodiversity and development, while the 2010 Biodiversity Target identified mainstreaming biodiversity in development sectors as a central goal. However, to date, biodiversity policy has focused mainly on conservation through protected areas, and relatively little effort has been made to engage with the underlying drivers of biodiversity loss across different development sectors.

The new emphasis on partnerships with communities and "mainstreaming biodiversity" calls for a different approach to biodiversity governance. Two important sets of "good governance" principles for biodiversity, notably the CBD's ecosystem approach (2000) and the Durban Principles on protected areas (2003), seek to move biodiversity governance in this direction. Both sets of principles stress that decisions are best made by those living closest to the resource, given the complexity, variability and unpredictability of natural ecosystems. The Millennium Ecosystem Assessment and other studies also identify good governance of biodiversity, including participation, decentralisation, local rights and equity, as key to improving outcomes for both biodiversity and livelihoods, given that livelihood benefits provide incentives for biodiversity management.

Are these good governance principles being implemented in practice? This report suggests that, for the most part, the answer is no. The global review and country case studies show that many conservation organisations—both government and NGO—have introduced more participatory conservation policies and are thinking about how to address poverty issues, but have yet to make significant changes in practice. The CBD recently found that only 12% of Parties are substantially applying the ecosystem approach, despite its importance for addressing the MA findings. Biodiversity decisions are largely made in national and international fora, but local biodiversity managers and customary rights holders are largely absent from these fora. And while the extent of protected area coverage has increased, progress towards more equitable governance of protected areas has been limited overall. Progress with mainstreaming biodiversity has also been limited in many countries and sectors.

Nevertheless, there are some positive signs and experiences on which to build:

- A few international NGOs are now working closely with local organisations to address both conservation and livelihoods goals.
- Some donor, NGO and government projects are strengthening community institutions to decentralise biodiversity management.
- Lessons from local experience have helped shape some participatory NRM policies that provide clear incentives for community participation (eg. PFM in Tanzania).
- Participation in national biodiversity policymaking has led to implementation on the ground (eg. NBSAP in India).
- Greater coherence has been achieved between conservation and rights policies (eg. in Peru and India).
- Progress has been made towards mainstreaming environment in some cases (eg. in Tanzania).

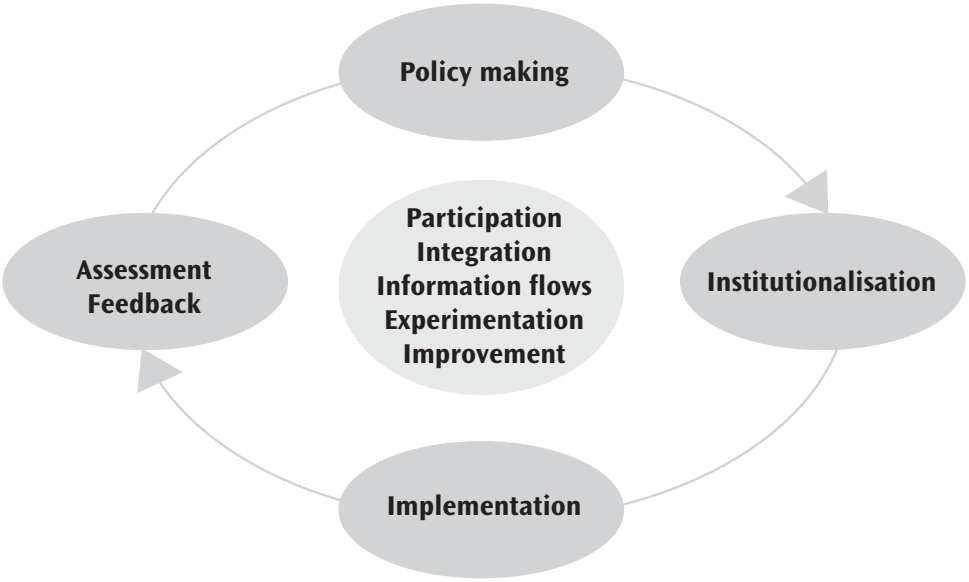
The rest of this section explores the stumbling blocks to scaling-up such positive initiatives further and makes recommendations for improving the governance of biodiversity.

It is evident from the three case studies that the last one or two decades have witnessed rapid economic changes along with declining governance standards, placing a growing strain on natural resources and rural livelihoods. In Tanzania, economic liberalisation along with a lack of transparency has benefited companies and elites but brought significant environmental and social costs. Similarly in India and Peru, a strong focus on economic growth, export and trade has come at the expense of natural resources and rural communities. The studies and the global review also show that poor governance (eg. illegal resource use, institutionalised corruption and lack of transparency) is a major obstacle to the implementation of new policies on participatory and community-based NRM (eg. in Tanzania). Hence improving governance is key to both slowing the loss of biodiversity and making its use and conservation more equitable.

10.1. Improving policymaking processes

As this report has shown, policy is as much about process and politics as about content. Installing the attributes of effective policy processes—participation, decentralisation, local rights and institutions, co-ordination between sectors, learning from local experience, etc.—is critical not only to make biodiversity governance more equitable, but to ensure biodiversity policy is implemented *and* mainstreamed in development sectors. It may be difficult to promote effective CBD implementation unless the different actors/sectors with a role to play are involved in the policy process. Biodiversity policy should be a cyclical learning process which is continually improved based on stakeholder participation and local experience (see diagram below).

Rather than the current preoccupation with supporting large-scale conservation projects to protect wildlife or forests, which have political appeal and provide a "quick-fix", support is needed to address the underlying governance problems that result in the loss of biodiversity and conservation measures with social costs. We need to get involved in the murky, complex and political world of governance if we are to tackle the drivers of biodiversity loss and inequity. This means supporting projects which seek to understand and influence current governance regimes, bring together those who control biodiversity policy and marginalised groups, and move policy debates forward.



Actively engage indigenous representatives in CBD decision-making processes

Representatives of the major groups whose territories overlap with biodiversity hotspots and protected areas should be invited to participate in the CBD negotiations as equal partners. They should also participate in the decision-making fora of national biodiversity and protected area authorities. This is consistent with the CBD, which identifies the particular role of indigenous and local communities in biodiversity conservation and sustainable use (Articles 8(j), 10 (c) and Preamble). It would also be one step towards implementing the ecosystem approach and Durban Principles. As a priority, participatory mechanisms should be established in the CBD COP, the Working Group on Protected Areas and the Working Group on Access and Benefit-Sharing. Precedents exist for active participation by representatives of indigenous and local communities in UN fora. One example is the CBD Working Group on Article 8(j). Another is the UN Permanent Forum on Indigenous Issues, which comprises seven member states and seven indigenous members, each representing a region and with equal participation. Representation of all biodiversity-dependent groups at global and national level will never be perfect, but some representation is better than none.

Improve participation in national policy processes, especially by local groups

Broad participation in the development of biodiversity and conservation policy, including by local biodiversity managers, is key for enhancing equity in the governance of biodiversity. Experience also shows the importance of stakeholder participation in developing effective policies for community-based conservation. However, the global review and case studies show that civil society participation in biodiversity policymaking tends to be fairly limited. For example in India, when consultations are held, civil society views are often not taken on board. In the case of the NBSAP, although an extensive participatory process was undertaken, many of the findings were ignored and it took three years for the policy to be adopted. Industry pressure in recent years has also meant that many civil society representatives have been taken off government advisory committees. Furthermore, in all three countries, *protectionist lobbies* have more influence over conservation policy than people-centred conservation NGOs. In Tanzania and Peru, these lobbies comprise wealthy international conservation NGOs, while in India the wildlife lobby comprises powerful national NGOs and urban elites. In all cases, indigenous and civil rights groups, which represent local organisations and communities, have very little influence over biodiversity policy (and policy in general). This, combined with alarmist media stories of illegal logging etc. (eg. in Tanzania), is helping to sustain protectionist narratives.

Link global biodiversity decisions with local priorities via multi-stakeholder fora

Major decisions about conservation priorities and financing are taken by intergovernmental organisations such as the CBD and the GEF, international conservation NGOs and national governments. But these decisions are inevitably implemented at local level, often on lands and waters traditionally occupied and used by indigenous and local communities. Thus, global and national biodiversity decisions often conflict with resource management decisions made locally by those expected to implement them. To date, many biodiversity decisions—notably around protected areas—have excluded local biodiversity managers and conflicted with their needs. In developing countries where the high enforcement costs of exclusionary protected areas are hard to meet, partnerships with local biodiversity managers are likely to improve conservation outcomes and be more cost-effective in the long term. Conservation values form part of the culture of many indigenous and local communities, particularly more remote communities and elders, but communities may have different priorities (eg. in terms of what should be conserved, how and for what).

Multi-stakeholder fora are needed to enable local communities living in biodiversity-rich areas to become part of biodiversity decision-making processes, including of the CBD, the GEF, international conservation NGOs, national conservation authorities, local governments, protected areas and individual projects. This will allow synergies to be found between global and local values, and trade-offs to be negotiated where this is not possible.

Feed local knowledge, and science, into decision-making

This report has highlighted how science tends to dominate local knowledge in shaping biodiversity decisions. But both need to be taken into account so that decisions are shaped by local realities, rather than dominant paradigms and received wisdom. Thus there is also an urgent need to support policies, practices and processes that strengthen local voices in scientific research agendas. Such steps could include:

- Broadening admission criteria to negotiation spaces where the validity of policy and scientific knowledge is judged (often termed "extended peer review").
- Engaging a broad range of actors in co-determining policy processes and the goals of scientific research on biodiversity.
- Diversifying the governance and membership of budget allocation committees of public sector planning and policy/technical research institutes (eg. the CGIAR Council) to include representatives of farmer, pastoralist, forest and fishing communities and indigenous people's organisations.

This should enable genuine societal choices—not just technically justified managerial decisions—to guide public policies, science and technology for biodiversity management in a variety of settings (Pimbert, 2003).

10.2. Recognising and enforcing local rights

Develop good governance principles for genetic resources

Although it requires countries to protect customary use of biodiversity, the CBD does not recognise the customary rights of indigenous and local communities over the genetic resources on or originating from their territories. This is despite the fact that they have usually conserved them, and have domesticated and improved many agricultural varieties. Resistance to this recognition comes from industrialised countries and their life science lobbies, who wish to ensure easy access to genetic resources, and keep consent and benefit-sharing requirements minimal and voluntary. It also comes from Southern countries keen on asserting "state sovereignty" over genetic resources.

However, customary rights over genetic resources *are* recognised by international agreements on indigenous and human rights, and by the CBD working group on Article 8(j). The Bonn Guidelines on ABS recommend stakeholder participation and community PIC for access to *in situ* resources, but not to *ex situ* resources, many of which

originate from community territories. Good governance principles for genetic resources would complement (and reflect) those for ecosystems (ecosystem approach) and protected areas/species (Durban Principles). As a minimum, the right of indigenous and local communities to decide over access to genetic resources they customarily use (eg. traditional crop varieties) should be recognised and made subject to their prior informed consent. In addition, communities should be allowed access to *ex situ* genetic resources they have lost, to enable adaptation to climate change. Furthermore, the whole premise of the CBD is in jeopardy as long as Northern countries refuse to agree to a legally-binding international regime on ABS, as mandated by the heads of state at the WSSD in 2002 and endorsed by the UN General Assembly.

Distinguish between biodiversity rights-holders and stake-holders

Allowing local biodiversity managers to be equal partners in biodiversity governance does not necessarily entitle other stakeholders to do the same. A distinction needs to be made between *rights*-holders, who have traditionally used and conserved biodiversity on their ancestral territories and depend directly on biodiversity day to day; and *stake*holders, such as industry. The private sector may have an interest in using biodiversity, or in financing its conservation, but cannot claim customary rights or dependence on it. Furthermore, their objectives often conflict with those of the CBD's public good agenda because they primarily seek private profit. Unlike local communities, the private sector may have little incentive for, or knowledge of, sound biodiversity management. As well as distinguishing between rights and interests, rights-holders in biodiversity decision-making should be identified on the basis of their ability to deliver social justice, ecological sustainability and democratic accountability in the governance of biodiversity (Pimbert, 2003). Small and medium enterprises, for example, can play an important role in both conservation and livelihoods, while being locally accountable.

Provide clear incentives for community participation in NRM

Secure legal rights to benefit from natural resources gives communities a key incentive to participate in and sustain NRM. In many cases (eg. CBNRM in Southern Africa and JFM in India), new policies for participatory resource management have not gone far enough in devolving authority and rights. In others, such as PFM in Tanzania, which built extensively on local experience, a very favourable policy and legal environment has been introduced. This provides strong incentives for community participation in forest management through full transfer of rights and returns to communities, along with relatively few requirements for communities wanting to initiate PFM (on unreserved forest land). By contrast, Tanzania's community wildlife regulations are complex and cumbersome and confer fewer benefits. As a result, PFM has become fairly widespread, while only a few community wildlife management areas are operating.

Devolve resource rights and create strong local institutions

Secure rights to land and natural resources are central for generating livelihood benefits which in turn provide the necessary incentives for communities to engage in CBC and sustain initiatives once an external project ends. They are important livelihood benefits in themselves, and are also important for communities to take a long term view and invest in developing NRM systems. Strong and democratic local institutions are needed to promote equitable benefit-sharing and downward accountability (often accountability remains to external NR agencies). Where community institutions for resource management have been weakened, investing in strengthening local institutions is likely to be more effective in delivering conservation outcomes in the long term, than the imposition of top-down regimes which further undermine local institutions and therefore increase reliance on external institutions and funding. As Tanzania's experience shows, strengthening existing local institutions is likely to be more effective than creating new ones, while building on traditional institutions, knowledge and practices may be necessary to secure active community participation.

As is evident from both the global review and case studies, governments and conservation NGOs rarely invest in building local institutions. In India for example, village *panchayats* and Biodiversity Management Committees appear on paper to provide a progressive decentralised institutional set-up, but in reality very little support is given to building *panchayat* institutions, while BMCs have only limited powers. Furthermore, JFM committees have often

been used to enhance government control of forests. Nevertheless, these local institutions provide a starting point which can be strengthened and improved, eg. with NGO support.

Other governance barriers to community-based conservation which should be removed include:

- Institutional constraints: mainstreaming participatory conservation approaches in government and NGO institutions—in their procedures, project management, budgets, job descriptions, institutional culture, incentives, rewards etc. will encourage innovation and real decentralisation from the top.

- Policy constraints: reforming "extra-sectoral" natural resource and economic policies and processes will remove constraints to sustainable use by local communities (across a range of sectors, eg. agriculture, trade, education/culture etc).

- Property rights constraints: giving communities in biodiversity-rich areas secure land and resource rights, both legally and in practice, will provide incentives for sustainable management.

Similarly, the MA found that governance approaches that support biodiversity and strong institutions are required at all levels, and identified the need to build on and support existing local practices and institutions that work. Changing existing customary rights embedded in local societies through external incentive schemes is very difficult.

10.3. Strengthening governance at the local level

Balance national control and enforcement with devolved governance

Biodiversity governance regimes need to shift from the current dominant focus on state-run protected areas and legal enforcement to support a greater diversity of governance approaches. These include sustainable use, community conserved areas and co-management, all of which recognise and build on existing governance arrangements at local level. As noted in the Tanzania study, the role of the state in providing a legal framework needs to be balanced with empowerment of local communities to sustainably manage biodiversity.

The Durban World Parks Congress and the CBD COP7 also emphasised the need to recognise various protected area governance types and other forms of biodiversity governance such as CCAs. Both within and outside protected areas, there is a need to move away from centralised control over biodiversity resources to devolve management and user rights to local communities and private land-owners, in order to enhance local incentives for conservation. It is not a question of one approach being better than the other, but of finding the best approach for the local context. Some contexts may require strict protection approaches, while in others conservation goals can best or equally be met by community-based approaches. As well as more inclusive decision-making structures, changing governance regimes is likely to require further empirical research on the type of governance best suited for maximising outcomes for both biodiversity and livelihoods in different resource and social contexts, and the impacts of different regimes.

Apply good governance principles to protected area management

In all three case studies, protected area planning and management is still largely top-down and exclusionary. While outreach programmes help to mitigate the impacts of restricted resource access, many communities are still adversely affected. In India, for example, displacement is associated with many protected areas, often without adequate compensation. However, the extent of the social impacts of protected areas is unclear. In Peru, where a protected area co-management policy has been introduced, communities are still largely absent from decision-making fora for protected areas. In all the case studies, mechanisms for sharing revenues from national parks with local communities have yet to be developed.

The practical implications of applying the Durban Principles and the ecosystem approach to protected areas include:

- Reviewing the governance of all protected areas to ensure they comply with the rights-based approach. This means recognising pre-existing customary rights to land and resources; sharing benefits fairly so that poor communities do not bear just the costs of conservation; enabling active community participation in PA management (even if use is not allowed); and creating shared or devolved management responsibility. These steps are likely to improve both conservation and social impacts, particularly where there are serious conflicts with communities and poaching problems.

- Replacing "one size fits all" protected area approaches to support a far greater diversity of governance models, including community conserved areas and productive landscapes (eg. traditional agriculture, rangeland management etc), in accordance with diverse local contexts.

- Giving communities compensation equal to the loss of livelihood, income and opportunity where community exclusion is the only means of protecting critical biodiversity.

Enhance support for CCAs and agro-biodiversity

The contribution to national and global conservation goals of functioning decentralised governance regimes such as community conserved areas and community-based conservation needs to be recognised and supported by governments, both legally and financially. Most CCAs are outside official protected area networks and are therefore given low priority in national conservation efforts. They are recognised in relevant international instruments such as the UN list of Protected Areas (Pimbert, 2003).

In situ agro-biodiversity conservation is a relatively neglected area, even though such agro-biodiversity is important for local livelihoods and global food security and its *in situ* conservation is critical for maintaining adaptation processes to climate change and for meeting the MDGs. As evident from the Peru case study, culture plays a key role in both sustaining agro-biodiversity and reducing poverty. For Andean communities, monetary measures of poverty are of little meaning, since poverty is defined as loss of biodiversity, culture and traditional knowledge. Hence local strategies for poverty reduction identified the need for CCAs.

Create new institutional incentives to encourage devolution and start building downward accountability

Moving from top-down regulation and project implementation to support for community conservation requires a change in the role of external institutions and new incentives to promote devolution of rights, revenues and decision-making power. Such institutional change is vital if the potential impacts of community conservation are to be fully realised and if CBC is to be scaled-up from area-based projects to country-wide programmes. But it will take time to achieve, and will require:

- New institutional incentives that can replace personal motives and illegal revenues.

- Institutional reforms and persistent efforts at all levels—legal, planning procedures, job descriptions, finance and institutional cultures.

- Changing the mind-sets of conservation/NR officials and professionals, through training and education courses for conservation staff in colleges and universities which promote socially-oriented and cross-sectoral approaches. Learning by doing is likely to achieve more than training on its own, but may also face strong institutional resistance.

- A change in the role of donors and NGOs from one of project implementation to providing long-term, flexible support for processes to transform governance and the day to day politics of the "governed". Hence the transition to CBC may be best supported by donor governance programmes and development NGOs, as opposed to conservation programmes and NGOs.

- Strengthening community legal awareness and confidence to claim entitlements under the new policies, particularly given that states have often controlled natural resources for several decades, and information flows to communities may have been constrained by vested interests.

10.4. Improving policy coherence and mainstreaming biodiversity across all sectors

Revise conservation policies to promote coherence with human rights frameworks

National policy and law for conservation need to be harmonised with those on the rights of indigenous and local communities (eg. tribal rights law in India, and ILO 169 in Peru). As emphasised in the India case study, conservation rulings and wildlife policy often contravene constitutional provisions on tribal peoples' rights. This lack of coherence acts as a barrier to achieving both objectives. India's recent Forest Tribal Rights Act, which recognises the customary rights of tribal and traditional forest dwellers, is a significant step towards harmonising the two. National conservation laws should also be harmonised with international agreements on indigenous and human rights, which reflect the needs and values of local biodiversity managers. Similarly, at international level, some of the CBD provisions do not take account of indigenous and human rights agreements. Thus the lack of coherence between the CBD 8(j) working group which recognises customary resource rights and the working groups dealing with protected areas and genetic resources needs to be addressed.

Tackle mainstreaming by building on existing integrating processes rather than through separate master plans

As we have seen, limited progress has been made on mainstreaming biodiversity in different economic sectors, despite this being central to meeting the 2010 target. It is clear that decisions and institutions outside the biodiversity "sector" often have far more influence over biodiversity than those within it. Experience with NSSDs and a recent CBD review of NBSAPs highlight that the most successful strategies are those that build on existing procedures and processes, and hence have a well developed sense of ownership, as opposed to being a separate master plan. Similarly, in Tanzania environmental mainstreaming progressed well by linking together a series of processes happening in different spheres.

Promote mainstreaming via local institutions, but with support from higher-level institutions

Mainstreaming has been most successful at local level, where life is not divided into sectors and "mainstreaming" can happen naturally. More funding is needed to strengthen biodiversity managers' local institutions—not only to decentralise and democratise biodiversity governance, but also to support the institutions that can best mainstream biodiversity locally. Those who depend on biodiversity need to be heard in national debates so that they can argue for biodiversity to be conserved and stress its role in local livelihoods/economies. Case study examples of mainstreaming by local communities need to be compiled to assist governments to develop more appropriate institutional systems to support mainstreaming. Given the difficulty in promoting sectoral co-ordination between national institutions, financial incentives may be required for sectoral departments to promote more coherent policies, and a shift in institutional cultures to foster collaboration towards common overall objectives. Both the global review and country experiences emphasise the need for high level political support to provide a clear mandate for mainstreaming and actively engage different sectors, including finance departments. Mainstreaming is a political and institutional process, unlikely to be achieved through a single technical project.

Strengthen global and national biodiversity institutions

A recurring theme in the governance of biodiversity is the weakness of international and national biodiversity institutions. The CBD has little clout over its country Parties and other international bodies, while national CBD units tend to be weak policy institutions with no or limited budgets of their own. Departments for wildlife and forestry tend to have greater control of conservation policy. Furthermore, the CBD process suffers from an overload of decisions, guidelines, etc. which are rarely implemented due to limited capacity. At international level, biodiversity institutions are marginalised from more powerful economic fora such as those of the WTO; and are being sidelined

in favour of regional and bilateral trade agreements negotiated largely behind closed doors. Yet these economic and trade institutions tend to have far greater influence, largely negative, over the fate of biodiversity.

Emphasise the economic benefits of biodiversity conservation

The biodiversity community needs to focus far more on the links between biodiversity and development objectives if it is to reverse current trends of biodiversity degradation. It needs to convince politicians and finance ministers of the need to start investing in building biodiversity assets, by making the economic case and linking biodiversity to agendas that matter (eg. poverty reduction, social justice, security and climate change). This means compiling data on the value of biodiversity to economic development, the economic returns on investments in biodiversity conservation and the costs of its loss. However, it is easier to measure the costs of biodiversity conservation than the benefits of that conservation. Valuation of indirect use values, such as the contribution of biodiversity to ecosystem services, is problematic and some aspects of biodiversity's values are difficult to quantify. Nevertheless, it is possible to express all biodiversity values in economic terms; the methods and tools exist but need to be more widely used and refined through use.

CHAPTER 11. WAYS FORWARD

As noted above, despite the existence of good governance principles for biodiversity, there has been limited progress in their application in practice. The CBD and human rights instruments lack teeth, and current patterns of biodiversity governance are often difficult to shift because they serve the interests of powerful elites (who control valuable natural resources, tourism revenues and so on). Given the big differences in power between those who control biodiversity decisions and those who are excluded, things are unlikely to change significantly without concerted action to:

- *Strengthen the capacity of local communities* to take control of biodiversity, negotiate entitlements with more powerful actors, and participate in shaping biodiversity policies, institutions and processes.

- *Understand current governance regimes* from local to national level, and establish multi-stakeholder processes to bring together powerful and marginalised actors, local experience and national policy, and different sectors and institutions.

- Produce hard *data comparing the impacts of decentralised approaches* (eg. community conservation) on biodiversity with top-down protected area approaches; and on the contribution of biodiversity to local, national and global economies.

- Encourage experimentation with new *pilot projects of decentralised institutional arrangements* and learning-by-doing to promote institutional change.

The case studies in India, Tanzania and Peru backed the need for a two-pronged action-research approach to improve biodiversity governance, consisting of:

1. *Participatory research at community level:* to examine the impacts of external policies and institutions, as well as internal governance processes (within and between communities), on biodiversity and livelihoods. The participatory analysis process could strengthen community capacity to influence external governance and local institutions for decentralised resource management. Such local case studies could also gather data on biodiversity-livelihood links, and the impacts of different governance regimes on biodiversity and livelihoods. However, assessing biodiversity and livelihoods impacts and linking governance attributes with such impacts may be methodologically challenging, particularly where baseline data are lacking.

2. *Analysis of biodiversity governance (ie. policies, institutions and processes) from local-national level*, and how to improve it, using participatory research approaches designed to improve governance through the research process. This could involve multi-stakeholder "governance learning groups", which bring together different actors (including powerholders and marginalised groups) to examine the results of the local case studies and other governance studies. Such fora could promote dialogue and negotiation between different actors, strengthen policy communities, move forward policy debates and take advantage of opportunities for influencing policy (see below).

More specific suggestions for action-research and tactics for influencing policy were identified through the three governance case studies. The rest of this section further explores approaches and methodologies which can be used to improve biodiversity governance, focusing in particular on empowering marginalised communities, and understanding and improving governance regimes from local to national level. Although many of the examples are drawn from IIED's work, it is important to note that there are many other relevant governance initiatives, some of which are highlighted in this section and the final section on "Going further".

11.1. Community empowerment approaches

Community empowerment is critical for improving the governance of biodiversity. Reluctance of government institutions to share power with local communities is a key constraint to decentralisation of biodiversity management

and evolution of co-management agreements. Power differences give rise to political marginalisation—exclusion from collective or representative decision-making—which is closely linked to other forms of marginalisation (economic, geographic, social, cultural and informational). It is seldom possible to tackle exclusion from natural resource decision-making without addressing many of the other ways in which people are excluded in society (Vermeulen, 2005). Empowerment describes a process of moving from marginalisation to inclusion. It involves elements of both capacity-building and of claiming, and thereby reducing, power held by others. However, empowerment cannot be imposed from above; it means creating the funds and political space to help people take control of their resources, make choices, and gain a stronger influence in decision-making (Bigg, 2006). Approaches for empowering communities are discussed below.

Strengthening local institutions

Representative local organisations of biodiversity managers, including indigenous people, peasant farmers, fisherfolk, herbalists, forest dwellers, pastoralists, etc. provide a key mechanism for empowering marginalised communities to take control of biodiversity resources and negotiate with others. Diverse local organisations—eg. community groups, poor people's organisations, farmers' organisations, producer co-operatives and others—provide a vital means by which poor, marginalised groups can achieve greater influence over politics and decision-making locally and nationally. Although they are often invisible to outsiders, the delivery of improved outcomes for millions of people on the ground depends on having effective local structures, whether for administering land rights, or improved management of land, forestry and biodiversity (Bigg, 2006).

Indigenous peoples tend to be better organised into representative organisations than other marginalised communities, although peasant farmers and fisherfolk are organised to some extent. However, indigenous people include a range of natural resource users (peasant farmers, pastoralists, forest dwellers, etc.), and tend to be more politically and economically marginalised than non-indigenous communities in biodiversity-rich areas. While there has been some work to strengthen local institutions of biodiversity managers at community level, and to link local institutions with international players, there remains a particular need to strengthen representative institutions at local to national levels.

Local institutions need to be truly representative and locally accountable if they are to promote equity and gain legitimacy both locally and more widely. External organisations (eg. NGOs, donors) have a key role to play in supporting existing local institutions (eg. through small grants, networking, information); and in facilitating their re-emergence where they have been weakened or broken down. The latter often involves participatory action-research processes where communities analyse, debate and negotiate the objectives, roles and responsibilities of collective local institutions for NRM. An example of this is IIED's programme on *Sustaining Local Food Systems, Agricultural Biodiversity and Livelihoods* which aims to strengthen decentralised governance of biodiversity and local institutions for adaptive resource management.[61] Experience with processes to facilitate building local institutions for NRM has also been gained in various sectors and contexts, not least in common property resource management in dryland Africa.[62] Local NRM institutions can take a range of forms, including traditional authorities and customary rules; farmers', healers', fisherfolk and women's associations; fora for common property resource management amongst different user groups; associations of neighbouring communities; co-operatives of local producers (eg. of NTFPs); and labour associations.

Establishing regional federations

When local organisations join forces to form regional federations, they can be far more effective mechanisms for building counterveiling power, because they represent larger numbers of people. Federations of the urban poor have gained significant ground in negotiating with local and national authorities over land tenure, housing, water and sanitation and so on. For example, the work of Shack/Slum Dwellers International (SDI) has grown into an international network of urban poor federations in 24 countries. These federations have begun to wield power

61 See www.diversefoodsystems.org

62 See for example Vogt and Vogt (2000). Shared management of common property resources. A case study from Takieta, Niger. *Securing the Commons* 2. IIED, London.

in negotiations with local authorities, aided by access to funds and information (eg. maps of urban settlements compiled by communities that authorities don't have).

Similar work is needed in rural areas to support the establishment of federations of the rural poor. However, this is likely to be more challenging and costly because of the logistics involved: the distances between dispersed rural communities and between them and local and national governments in urban centres. Furthermore, in rural areas, it can take a major "crisis" or conflict to mobilise such groups to form. By contrast, in urban settings, the proximity of poor communities to local and national governments can be a motivating factor for them to organise and take action.

Tackling power asymmetries

People marginalised from policy may find it useful to adapt strategies that have worked for others elsewhere. While blueprint "toolkit" approaches obviously have their limits, there are a number of ideas circulating in activist and NGO circles, in publications and on the internet. Examples of these include VeneKlasen and Miller (2002); CIVICUS (www.civicus.org); *PLA Notes* and the RCPLA Network (www.rcpla.org); the Power Tools series (see Box 30) and a host of others.

Box 30. Four types of "power tools"

IIED and partners have compiled 26 "power tools" that marginalised people can use to tackle power asymmetries. The tools are loosely grouped into four overlapping types:

Tools for understanding: These aim to scope out the current situation and opportunities with regard to policies and institutions and to plan a course of action. They include tools for acquiring and using information on policy, stakeholders, law and markets (eg. stakeholder influence mapping; stakeholder power analysis; and the 4 "Rs" framework to clarify roles, responsibilities, relationships and returns). They also include tools for overcoming internal barriers to empowerment, eg. lack of confidence and shared vision (see example in Box 31 of pastoral civil society); and for understanding the motives and language of the powerful.

Tools for organising: Policy influence by less powerful people often requires strength in numbers. Effective organisations are relevant to members' priorities, legitimate, active and accountable. These tools deal with management of local organisations according to agreed standards of representation, transparency and financial management; developing networks and alliances with other organisations; raising local support and external legitimacy; and the range of organisational options for community groups (co-operatives, trusts, etc.).

Tools for engaging: Engagement might be through dialogue or resistance; many effective groups use both. Tools for engaging in dialogue include finding entry points and empowering communities in negotiation processes; building alliances with sympathetic partners and possible champions; using media and lobby tactics; using the parliamentary system; harnessing evidence (eg. through appropriate monitoring) and encouraging participatory resource assessment.

Tools for ensuring: Having a voice is not enough—marginalised people need mechanisms for accountability to make sure that promises translate into action. These include independent monitoring; mechanisms for feedback and adjustment and for holding local authorities to account; knowledge and application of legal rights; and use of local systems of justice and the courts. For example, legal literacy camps in India are providing tribal people with information about their rights under the Indian Constitution and other laws.

For more information and case studies see www.policy-powertools.org.

The IIED-RECONCILE programme on Strengthening Pastoral Civil Society in East Africa illustrates some of these "power tools" in practice (Box 31). Pastoralists are continually marginalised because extensive pastoralism is widely believed to

lead to desertification and land degradation. The programme aims to empower pastoral civil society by building local organisational capacity; addressing the knowledge gap and building political leverage. It has focused on improving policymakers' and development practitioners' understanding of the rationale and dynamics of pastoral production systems; and building the capacity of pastoral leaders to articulate to the "outside world" how these systems work. Ultimately, the programme seeks the gradual emergence of a strong and viable pastoral civil society movement with a shared vision of how pastoralism should develop, playing an active and informed role in the design and implementation of policies to improve livelihood opportunities for their members (Box 31).

Box 31. Strengthening pastoral civil society in East Africa

For some time, the call has been for pastoralists to "modernise" and settle down. However, pastoralists' poverty and vulnerability are exacerbated by inappropriate policies and development interventions, based on poor understanding of pastoral systems. Thus, pastoralists need to play an effective role in framing the policies that affect their lives and convince policymakers of the rationale and benefits of their livelihood system. This is not easy given the widespread ignorance and even hostility towards pastoralists, combined with their own lack of confidence in their livelihood systems, fed by years of negative messages.

The IIED-RECONCILE programme involves training for pastoralists (facilitated by a pastoralist training guide) to examine their livelihood systems and re-kindle confidence in them. This, combined with collaborative policy research and networking activities, seeks to establish a favourable environment for the promotion of pastoral self-determination. **The next phase** will continue to build the capacity of pastoral groups to promote—among their members—greater understanding of the dynamics of pastoral livelihood systems in relation to the policy environment in order that local people, rather than those outside the system, frame the context in which pastoral development is designed and implemented. Second, the programme will institutionalise greater understanding of pastoralism within the formal education system in East Africa so that future generations of policymakers and development practitioners fully understand the rationale of pastoral land use systems.

Source: www.iied.org/natural-resources/home

Direct action approaches in India

Non-violent land movements in India mainly use tools derived from Gandhi's methods of non-cooperation and India's long history of popular resistance. Land distribution today is still not equitable, but the focus of activism has shifted from landlords to government. The report *Struggle-Dialogue: Tools for land movements in India* (Carr-Harris, 2005) presents and analyses a number of tools used today by non-cooperative, non-violent land movements in India, using *Ekta Parishad* (translated as "United Network") as a case study. The tools form a clear strategic continuum between struggle (resistance) and dialogue (engagement). Struggle and dialogue work together to make a force that government at various levels cannot ignore. See http://www.policy-powertools.org/related/NBSAP.html

11.2. Approaches for improving policies and institutions

Policy That Works (PTW) is an action-research approach for understanding and improving policies and institutions developed by IIED and its partners to address policy issues in forestry and agriculture. Alongside a research and analytical component, the PTW approach seeks to be strongly engaged in policy—to seize opportunities to influence policy, create political space and move policy debates forward. By engaging with many stakeholders, including powerholders and those marginalised from policy, the approach aims to broaden and energise the policy community and start installing some of the attributes of adaptive policy. It focuses in particular on improving policy processes, as opposed to policy instruments, and promoting learning between countries since key process challenges are often shared.[63]

63 For further information and case studies see *Policy That Works for Forests and People* (http://www.iied.org/pubs/search.php?s=FPTW); and *Policy That Works for Sustaining Agriculture and Regenerating Rural Economies* (http://www.iied.org/pubs/search.php?s=SPTW).

Based on the Policy That Works for Forests and People project, initial practical guidance for *Doing Policy Work* has been compiled, describing what can be involved, why it is worth doing, who should get involved and how to get started (Mayers, 2003). Policy work involves analysis and action on problems and opportunities. Progress is made when policy and institutional processes start learning from local solutions. This can be encouraged by people coming together to tackle local problems and by policymakers giving them the chance to experiment. Support can sometimes be provided to those who are currently marginalised from policy and institutional processes, so that they can present their views and experience and make their claims more effectively. This requires tools to identify the individual and organisational choices that are the hub of local issues and problems; tracing the rules, structures, markets and policy signals which affect them; and developing improvements. Policy work is also needed to stimulate and free-up some current policymakers and institutional leaders to learn, and be subject to checks and balances, from local levels (Mayers, 2003).

Examples of when policy work is needed include: re-thinking institutional systems and structures, negotiating roles and functions within and between institutions, fostering vision and momentum for change within or between organisations and working out how to scale-up and spread successful initiatives. Policy work can be done by a range of actors, including local groups wanting to tackle problems with wider political structures; practitioners concerned with understanding wider context and constraints and spreading local project success; and policymakers who want to ensure policy objectives are linked to on the ground practice so that both are continually improved (Mayers, 2003).

As a follow-up to Policy That Works for Forests and People, IIED initiated the Forest Governance Learning Group in 2003, which has established a number of Governance Learning Groups. These are ongoing processes of research and action (see below), rather than time bound projects.

Governance learning groups

Learning groups on natural resource governance can be important catalysts for understanding and improving governance, and can take various forms. Local learning groups can be useful as part of action research processes, to provide fora for communities to conduct their own analysis of policy issues that affect their lives; and to promote exchange of knowledge, practices and innovations between farmers to enrich local adaptive NRM processes (eg. local resource management groups or platforms, and farmer field schools). They may entail small group discussions at household level, or larger inter-community workshops to share the results of community analysis and build a collective vision. Alternatively, local governance learning groups may be set up to carry out governance case studies, through facilitated "governance evaluation" processes involving the social actors most directly concerned about natural resources and affected by the quality of their governance. They may also serve to bring together different local actors, including communities, local government and NGOs.

National learning groups can be used to link local research and experience to national policy, and promote policy influence as well as local-local learning. The emphasis on ongoing learning processes distinguishes them from project steering groups, which engage decision-makers in particular projects to promote the uptake of research. The composition, mandate and working methods should be tailored to the particular purpose of the learning group and the context in which it operates. Much will depend on the degree to which it is able to engage diverse actors and drive a process of informed debate with a view to influencing policy, and hence on the perceived legitimacy of the learning group. Learning groups can be difficult to manage and will usually require a talented convenor and facilitator willing to invest the time needed to foster a genuine process of learning.

IIED's *Forest Governance Learning Group*, for example, connects different policy actors and conducts research on various forest governance issues. Through country teams in 10 countries it seeks to connect those marginalised from forest governance (eg. forest dwellers) to those controlling it (eg. forestry departments and finance ministries), and to help both do things better. Activities involve participatory analysis, learning and training events, network building, supported uptake of governance tools, and taking advantage of direct opportunities for governance reform. Country teams involve opinion-formers and decision-makers, plus individuals who can articulate the issues faced by those marginalised from governance, and other facilitators who work with them. Inter-country capacity-

building and engagement with international policy are also involved (see http://www.iied.org/natural-resources/key-issues/forestry/forest-governance-learning-group).

Some learning groups focus primarily on promoting learning at international level. For example, IIED's *Poverty and Conservation Learning Group* brings together organisations that develop or influence conservation and poverty reduction policy and those that are affected by it. These include international conservation NGOs, Southern conservation NGOs, donor agencies and indigenous organisations. It fulfils two major functions through a website (www.povertyandconservation.info) and through learning events:

1) Promoting good practice through information provision and dissemination.

2) Influencing policy change through providing a programme of learning activities to organisations actively working on conservation-poverty linkages.

IIED's project on *Policy That Works for Biodiversity and Poverty Reduction* envisages local action-research processes feeding into parallel national learning groups which would also conduct additional governance studies. This combines a focus on strengthening the capacity of local communities to influence policy, and encouraging governments to open up policy processes. The national learning groups will aim to engage a range of actors, including researchers, policymakers, conservation NGOs, sectoral ministries and representatives of affected communities, in order to connect different actors and steer the research process. They will also seek direct opportunities for biodiversity governance reform. However, their exact purpose and composition may need to be tailored according to the policy and political context in different countries. It is envisaged that at the end of the project, the learning groups will continue or be formalised in some other appropriate form, to provide an ongoing forum for linking policy and practice and facilitating broad stakeholder engagement.

Deliberative democracy tools

New experiments with deliberative and inclusive approaches that link voices from below with national and international policy processes also offer opportunities to democratise the governance of biodiversity. They involve the creation of new spaces which allow marginalised groups to participate directly in policy debates (rather than relying on government channels of representation, which often do not work, or on advocacy intermediaries). Several procedures, techniques and methods are used to include diverse actors in deliberative processes. They include citizens' juries, consensus conferences, citizens' panels, scenario workshops, deliberative polling, focus groups, multi-criteria mapping, rapid and participatory learning and action, and visioning exercises. Citizens' juries, for example, provide a means for local actors most affected by policies to participate in assessing different policy options. They involve ordinary citizens hearing evidence on a particular policy choice from different perspectives, in the presence of independent witnesses to ensure a fair process, and then deciding for themselves on the basis of the evidence provided.

For example, farmers in Andhra Pradesh held a citizens' jury on the future of India's agriculture policy (Vision 20:20) which was likely to have serious impacts on small farmers. More recently, farmers in Mali deliberated on the pros and cons of GM crops and sent a clear anti-GMO message to national policymakers, which appears to have been heard.[64] Similar citizens' juries could be organised to enable local people to have an informed debate on different forms of biodiversity governance (eg. protected areas versus other approaches).

Policy instruments that improve the policy process

Finally, a number of natural resource policy studies have emphasised the importance of policy instruments that improve the policy process, for example policies and laws that:

64 http://www.iied.org/natural-resources/key-issues/food-and-agriculture/deliberative-democracy-citizens-juries#about

- Require participatory policy formulation, co-ordination between sectors, and transparent and accountable institutions.

- Recognise the rights of indigenous and local communities to participate in policies that affect them (eg. ILO Convention 169).

- Require public access to information.

Focusing efforts on promoting these kinds of policy instruments and laws that improve the process of policymaking and implementation across the board can have far greater impact than focusing only on changing the contents of a single policy instrument (see Mayers and Bass, 1999; Roe *et al*., 2000; Borrini-Feyerabend *et al*., 2004a).

11.3. Going further

Many of the references and websites given above list further information on approaches for community empowerment and policy improvement. The following are also worth highlighting:

- *Sharing Power: Learning-by-doing in co-management of natural resources throughout the world*, Borrini-Feyerabend, Pimbert, Farvar, Kothari and Renard, 2004, available from www.iied.org and www.iucn.org/bookstore.

- *Exploring Power for Change*, *Institute of Development Studies (IDS) Bulletin*: http://www.ids.ac.uk/ids/bookshop/bulletin/bull376.html. IDS, University of Sussex, UK.

- *Participation and Citizenship: Exploring Power for Change*, IDS, IIED and ODI Lunchtime Series *Development Horizons: Future Directions for Research and Policy*: http://www.odi.org.uk/events/horizons_nov06/22Jan/index.html

- *Governing the Environment: Political Change and Natural Resources Management in Eastern and Southern Africa*. Okoth-Ogendo and Tumushabe (1999). ACTS Press, African Centre for Technology Studies, Nairobi, Kenya. http://www.acts.or.ke/

- *Community Based Natural Resource Management in the IGAD Region*. Awimbo, Barrow and Karaba (eds), 2004. Intergovernemental Agency on Development Secretariat, IUCN Regional Office for Eastern Africa.

- *Guidelines for Mainstreaming Environment and Natural Resources Issues in Other Sectors and Programmes*. Government of Uganda 2003. Poverty Eradication Action Plan Review Sub-Committee, Kampala, Uganda.

- *Prajateerpu, Power and Knowledge: The politics of participatory action research in development* in *Action Research* 2(1): 25-46, SAGE Publications.

- *Deliberative Democracy and Citizen Empowerment* in *PLA Notes* 40, IIED, 2001.

- *Forest Law Enforcement and Governance Programme*, IUCN FLEG, see http://cms.iucn.org/about/work/programmes/forest/fp_our_work/fp_our_work_thematic/fp_our_work_flg/index.cfm

- Freirian approaches such as Reflect (initiated by ActionAid but now much wider). http://www.actionaid.org.uk/323/reflect.html

- Commodity roundtables that are trying to tackle both biodiversity and livelihoods (eg. on cotton, soy, palm oil).

ANNEX: LIST OF PEOPLE INTERVIEWED

Tanzania

David Howlett, Poverty-Environment Advisor, Vice President's Office
Blandina Cheche, Poverty-Environment Officer, Vice President's Office
Rawson Yonazi, Environment Division, Vice President's Office
David Kaggi, Community Development Officer, GTZ
Mr. Asukile, USAID
Arnold Mapinduzi, National Environment Management Council (NEMC)
Paul Nyiti, Wildlife Conservation Society of Tanzania
Hussein Sosovele, IRA and WWF
Raphael Mwalyosi, Director, IRA
Adrian Kahemela, Community Network Officer, TFCG
Niklas Herrmann, ORGUT (Sida Land Management Programme)
Donasiani Shayo, Wildlife Division
Tom Blomley, PFM Advisor, Forestry and Beekeeping Division, GoT
Edmund Barrow, IUCN East Africa Office
Issa Abdulrahman, IUCN Tanzania
Director, Research on Poverty Alleviation (REPOA), Tanzania

India

People Interviewed in New Delhi

Dr N.C. Saxena, formerly MoEF, Joint Forest Management
Dr Virinder Sharma, Livelihoods and Environment Advisor, DFID India
Dr. R. R. Mohan, Social and Environment Unit, World Bank
Dr. Rajesh Gopal, IGF and Director (Project Tiger), MoEF
V.K. Bahuguna, JFM Cell, MoEF
M. Shankar, Secretary, Ministry of Rural Development
Mahendra Vyas, Centrally Empowered Committee, Supreme Court
Dr Balachandran, Director, Ford Foundation India
Neera Bura, Assistant Resident Representative, UNDP India
Silvio Simonit, Sustainable Environment and Energy Division, UNDP India
Srikanta K. Panigrahi, Environment and Forest Division, Planning Commission
Prof. Abhijid Sen, Member for Agriculture, Planning Commission
V.L. Chopra, Member for Environment, Planning Commission
Devinder Sharma, Forum for Biotechnology and Food Security
Tariq Aziz, AREAS India, WWF-India
Ravi Agarwal, Director, Toxics Link
Shekhar Singh, Director, Samya – Centre for Equity Studies
Souparna Lahiri, Delhi Forum
Shalini Bhutani, GRAIN India (Genetic Resources Action International)
Dr. D.D. Verma, CBD Focal Point, MoEF
Tarun Coomar, Director, Ministry of Tribal Affairs

Participants at the Meeting in New Delhi
Ashish Kothari, Kalpavriksh India
Neema Pathak, Kalpavriksh India
Kanchi Kohli, Kalpavriksh India
Seema Bhatt, Independent Consultant
Madhu Sarin, Independent Consultant
Sushil Saigal , Winrock International
Sejal Wohra, WWF India
Colonel J.C. Kapoor, President, ENCARE – Environment and Social Care
Silvio Simonit, Sustainable Environment and Energy Division, UNDP India
Krystyna Swiderska IIED
Tarun Coomar, Ministry of Tribal Affairs
Srikanta K. Panigrahi, Environment and Forest Division, Planning Commission

NGO/Community Initiatives Interviewed
P.V. Satheesh, Director, Deccan Development Society
Vanaja Ramprasa, Director, GREEN Foundation

Peru

Carlos Loret de Mola, Presidente de la Comisión Nacional del Ambiente (CONAM)
Manuel Perea, Instituto Nacional de Desarrollo de los Pueblos Indígenas, Amazónicos y Afro peruanos (INDEPA)
Carlos Salinas, Intendente de Áreas Naturales Protegidas del INRENA.
Álvaro Gaillour, Gerente del Proyecto Gestión Participativa en Áreas Naturales Protegidas del PROFONANPE (Fondo Nacional de Áreas Protegidas por el Estado).
Gustavo Suárez de Freitas, Ex Intendente de Áreas Naturales Protegidas
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