



## PLOW Learning Resource: Natural Resource Management

### *Important Note:*

This learning resource was developed as part of the Professional Development for Livelihoods Advisers Website (PLOW) which was operational between 2006-2008.

PLOW was funded by the Department for International Development (DFID) and supported the professional development of DFID livelihoods advisers. PLOW hosted 17 learning modules of which this is one. Modules were produced using guidance provided by the Livelihoods Technical Competence Framework that described technical competencies, knowledge, and experience required by DFID Livelihoods Advisers.

PLOW modules were designed to help advisers get up to speed on areas of the competency framework, to prepare for new postings, or to refresh existing knowledge on particular subject areas. They were produced and developed by a partnership comprising the Programme of Advisory Support Service (PASS) and Livelihoods Connect based at the Institute of Development Studies (IDS). Each module was written by an expert or experts in the subject and provided:

- an overview of the subject in a briefing note;
- key texts;
- a summary of recent policy debates;
- points on where to find other resources; and
- a glossary of key terms used in the briefing note.

Although the learning modules produced were written with the DFID Livelihoods cadre in mind they were accessible to a global audience through the website.

Twelve of the original PLOW modules are now hosted on the Evidence on Demand website. This PLOW module was produced between 2005 and 2008 and has not been updated since. Some of the material that it draws upon may no longer represent current thinking and some of the links to resources may no longer exist. Nevertheless, we believe that it is still a useful resource that provides useful reference material.





# Natural Resource Management

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In Africa, South and South East Asia, and Latin America, renewable natural resources (RNRs) are primary to rural livelihoods - they provide shelter, fuel, water, food, soil for crops, and material for a multitude of livelihood activities. RNRs also contribute to urban livelihoods, particularly those of the urban poor. As such, they form the basis of both economic goods and productive assets, which reduce vulnerability and enhance livelihood security and wellbeing. As a significant component of people's livelihoods and key to rural development and good governance, central questions relate to the role they play in pro-poor growth and how to contribute to this goal while maintaining sustainability of the resource base, a major global challenge in the Twenty-first Century.

Natural resources are not static biophysical entities; they are defined by human institutions and therefore historically situated, socially embedded, and politically charged, as well as being economic commodities. By implication they defy simple categorisation since the institutional frameworks governing a natural resource are multiple, overlapping and dynamic. This means NRM is an arena shaped by different perceptions, values, interests, actors and institutions; a context that can generate bitter contestations over utilisation and management as resources become drawn between different demands and institutional claims. The picture is further complicated by the difference between RNRs in terms of inherent characteristics, use, and value: what applies to forestry management is very different from fisheries, pastoralism or wildlife conservation.

As they are a source of wealth and power, access to and control over natural resources is a major governance issue, especially when considering potential for pro-poor growth. Often conflicting interests over natural resources, and the many levels at which interests collide - from international to local - make them a difficult arena for which to generate effective policy. Increasing globalisation and the search by international finance for lucrative opportunities further increases pressure at the local-level for equitable resource access: this is particularly the case in Africa, where governance institutions are weak and national economies dependent on a rich natural resource endowment, and where conflict and political instability are fuelled by attempts to control access to resources. Evidence suggests that privatisation and enclosure of common pool resources is driving livelihood transformation, increasing inequality, and generating conflict. The question of how natural resources should be managed, by whom and for whose benefit, requires governance answers at the local, national, regional and international levels, adding to the complexity surrounding NR management.

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Management of natural resources is at the frontline of a struggle for more sustainable and equitable development. These resources are the basis for life on this planet, and their exploitation constitutes the primary source of livelihoods for most of the world's population. Indicators show, however, that natural resources are under extreme pressure through human practices and their productivity in decline. Fish stocks, for example, underpin the livelihoods of millions of people around the world, but are in a dire state; and 2 billion people living in dry regions are vulnerable to loss of ecosystem services, including water supply (UN, MEA: 2005). As the human population doubles, and as we seek to improve the welfare of the three billion people who live on less than two dollars a day, pressure on natural resources can only increase. This raises critical questions about whether and how natural resources can be managed to ensure ecosystem sustainability into the future while promoting the role of natural resources in pro-poor human growth.

### What are natural resources?

Natural resources are naturally occurring substances considered valuable in their natural form; they are often classified into renewable and non-renewable resources. Renewable natural resources (RNRs) are generally living resources (i.e. fauna and flora) but also soil, water, wind, tides, and solar radiation. Non-renewable resources can be extracted but not replaced, such as minerals and petroleum. This briefing note covers RNRs in the form of forestry, inland and marine fisheries, wildlife, and grazing but excludes discussion of land and water resource management, which are the subject of separate PLOW briefing notes. It introduces critical issues and key references in the context of livelihoods, pro-poor growth and vulnerability.

### Governance choices for natural resources

Major debates surround the levels and nature of governance for natural resources, focusing on three institutional arenas: the state, civil society and markets. The debates are focused on the effectiveness and appropriateness of each arena for delivering economic objectives, from natural resource conservation to equitable economic development and poverty reduction.

#### *Leave it to the Experts: Administrative Rationalism*

Historically, the state has been the key institution vested with authority over natural resource planning. Associated with this approach is reliance on expert knowledge, with officials' making management decisions in the public interest; this excluded other forms of knowledge and institutional arrangements, such as those held by local people. Traditionally, state controlled natural resource management (NRM) has been through sectoral management by centralised state institutions.

### *Leave it to the People: Democratic Pragmatism*

Over the last decades there has been a fundamental shift in approach to NRM, recognising the need to build more participatory multi-interest institutional frameworks. This emerged from criticism of centralised state control as highly bureaucratic, opaque, often corrupt and excluding the voice and knowledge of a range of actors with rights over the resource. In 1992, the Rio Declaration and Agenda 21 called for development of participatory natural resource management as a means for increasing efficiency and equity in natural resource management and use. This spawned many forms of community-based natural resource management arrangements, supported by governments, donors and international NGOs.

### *Leave it to the Market: Economic Rationalism*

Alongside a shift towards enabling civil society involvement in NRM, has been the growth of a market based approach, which holds that the distribution and utilisation of natural resources can be governed by market mechanisms. This position emerged from wider macro-level structural reforms and processes of economic liberalisation, notably in Africa, which focused attention on the natural resource base as a source of revenue and a means to revitalise stagnating economies. As a result, loans and support were provided to the development of large-scale commercial interests in natural resource exploitation. This fuelled the alleged unhealthy alliances between state and commercial enterprise in the capture of resources to the detriment of those natural-resource dependent peoples and to the wider societal benefit. In the process it has raised many questions about the degree to which the market should be used to regulate and control natural resources, particularly in terms of privatisation and assignation of private property rights.

## Failures of the governance arrangements

In reality each arena - the state, civil society and market - is subject to inherent failures, relating not just to function (effectiveness and efficiency) in a specific policy and delivery arena, but also to the opportunities that emerge for particular groups to capture benefits through private corruption or to dominate policy agendas and therefore policy outcomes. Failure has implications for poor people and their livelihood options and rights over natural resources. In practice, in many countries, for historic reasons, the major challenge lies in the degree of continued state involvement in NRM: the role of the state versus civil society control within and between the central state and local government. Questions of decentralisation and the devolution of resource management and control to civil society have become an important area for policy and practice. In addition, the sectoral treatment of natural resources within national policy and planning has in many circumstances led to increased conflict and poor management of resources. While there are good reasons for a sectoral approach, relating to the biological characteristics and management requirements of different resources, the interdependence of the various sectors needs recognition, particularly in relation to national frameworks for poverty reduction, which at present rarely make mention of the role of natural resources in poverty reduction or link to their use in the livelihood strategies of the poor.

## Key issues involved in managing RNRs

Key issues for the management of RNRs can be considered at different levels, international, regional or national, and local. Here we highlight a range of concerns, identifying some major actors and institutions; some of these concerns are further elaborated in the section on policy debates.

### International

Wildlife, biodiversity and natural forests are international public goods (IPGs) for which policy and governance is required at a supranational level, as value, management requirements, commodity chains, and impacts go beyond national boundaries. A range of policy, institutional and monitoring frameworks exist at the international level to attempt to regulate, manage and control off-takes and trade in commercial resources, such as timber, fish, and wildlife products, and to preserve biodiversity and take action on features such as habitat loss. To give some examples: the need for strengthened

international governance in fisheries became a pressing issue in the 1980s and 1990s because the boundaries of fish stocks can go beyond national borders, and due to the scarcity of fisheries resources, conflicts over commercial fishing operations, and importance of coastal livelihoods for the world's poor. This gave rise to a range of regulatory instruments, including the 1982 Convention on the Law of the Sea, the 1995 UN Fish Stocks Agreement, the 1993 FAO Compliance Agreement, and the 1995 FAO Code of Conduct for Responsible Fisheries. In contrast, to date, no international convention has been agreed in forestry, although the European Union's Forest Law Enforcement, Governance and Trade initiative is an important response to the global problem of illegal logging and trade in associated timber products. In the sphere of biodiversity conservation, illegal trade in wildlife products is a lucrative industry, endangering many key species; with a wide array of international actors pressing for action there have been a number of international agreements, like the 1992 Convention on Biological Diversity and the Convention on International Trade in Endangered Species of Wild Fauna and Flora, and monitoring measures such as work undertaken by the WWF-sponsored wildlife trade monitoring network, TRAFFIC.

The international level is also becoming increasingly important in terms of the links between RNR and disaster risk reduction, with calls by organisations such as the International Committee of the Red Cross for improved institutional mechanisms - like transnational accountability agreements - to take into account the way environmental policies and actions in one country affect others, for instance along river basins and coastal areas, to help avoid transformation of environmental hazards into future disasters in relation to the management of renewable resources that have long-term public good characteristics.

## National

While international governance frameworks, agreements and regulatory instruments provide an institutional context and mechanisms for action on critical natural resource management issues, moving from international convention to national change and enforcement of natural resource laws remains a serious challenge. Transforming governance systems of natural resources through institutional reform is a slow and critical process that may or may not ultimately affect the nature, control and beneficiaries of the supply of natural resource products or trade offs between commercial use, livelihood needs and biodiversity preservation for the public good. At this level, a range of governance issues come to the fore in the relationship between the state, civil society and the market, as highlighted in the section above, some vary according to regional and country context, but there are also shared concerns.

### Distribution of resource rents

Some of the most important institutional issues concern the arrangements for access to natural resources and the shares in the rents from them. Natural resource management authorities face three broad problems: (i) the development of management instruments that enable resource rents to be generated on a sustainable basis; (ii) determining the appropriate institutional arrangements for management - decentralized, centralized, through the market, devolved to communities or hybrid arrangements such as co-management with state/communities; (iii) establishment of fiscal arrangements that enable the resource rents generated to be shared between stakeholders, including government, in an appropriate way, often equated to equitable sharing. This leads to a series of decisions about the nature of management instruments through licensing and controlling access through allocation of spatial use rights (such as forestry and wildlife concessions and fishing lots). There are three sets of decisions concerning the allocation of rents which have fundamental effects on resource exploitation:

1. The share of rents between the public sector and the particular natural resource sector.
2. For the public sector share - the level at which it is extracted - national, regional or local and the level at which it is spent, where the two are not necessarily the same.
3. Use of the rents - how much should be spent on the particular natural resource sector itself, how much on the resource dependent communities and how much for the general good through the National Treasury.

The decisions concerning management instruments, institutional arrangements and rent-sharing will necessarily have profound impacts on the poverty outcomes and potential for pro-poor growth.

## Natural resources and pro-poor growth

Against this governance context, the transformation of nature into tradable commodities is fundamentally a political process involving the definition of property rights, the organisation of labour and the allocation of profits. Access to the commodity value chain is often closely linked to social identities and mirrors existing inequalities along ethnicity and class lines. Natural resources have the potential to drive or suppress growth and do not necessarily provide a path out of poverty. There are perverse economic and institutional effects of resource dependence which include a high exposure to external shock, especially fluctuations in resource prices which means that encouraging livelihoods based on natural resources can be high risk, particularly for poorer households with low capabilities for livelihood diversification and opportunities. Indeed, patterns of tight economic and political control of natural resources by the ruling elite leaves little scope for accumulating wealth outside state patronage. The availability of the resource rent often results in corruption of state institutions; and high levels of illegality in resource management and product extraction. Without the political and institutional structures necessary to balance these forms of predatory practices, natural resources become the engine for conflict and not for growth. This returns us to the discussion of options for natural resource governance, the need for fiscal reform and an understanding of the use of natural resource products as a driver of local economic development (through wildlife and tourism, investment in post-harvest fisheries, etc.) with the necessary policy and institutional frameworks to support this.

### Local level: effectiveness of decentralization?

Focusing on the local level, processes of decentralisation have been taking place around the world, driven by the idea that stronger local governance will ensure that decision-making on NRM is locally appropriate and decision-makers more accountable citizens. Decentralising authority in administrative structures is held to make forms of participation and co-management of natural resources more meaningful, with devolution of power and resources from the centre to the local level thought to place local government in a good position to understand the environmental risks people face. It does not, however, necessarily follow that increased power will equate with improved equity or address entrenched exclusionary practices based on wealth or forms of social identity that contribute to inequitable access to natural resources or increased vulnerability to natural hazards. Indeed, experience to date suggests the effects of devolution in natural resource management are mixed with limited evidence of substantial poverty reduction outcomes, coupled with continued potential for elite capture of resources and resource management outcomes.

### Importance of property rights?

Property rights can be important constraints to the adoption of natural resource management practices that can help improve poor people's livelihoods and improve environmental degradation. Many improved NRM practices require long-term investments, which individuals may only make if they have sufficiently secure and long-term rights over land or other resources, or require effective collective action in the case of common pool resources. Examples include grazing land practices, watershed management, and upkeep of indigenous irrigation schemes. There is, however, a need to recognise the gap between de jure and de facto jurisdiction over property as the use of land, water and trees may be governed by socio-cultural norms and practices to a far greater extent than by legal ownership by individuals or households. In the case of common pool resources, such as rangelands, forests, fallow fields and ponds, which provide many socio-economic benefits to multiple actors, poor definition and enforcement of institutional arrangements governing the use of resources can lead to social conflicts and resource degradation.

In the nexus between competing claims over resources - commercial operations, the livelihood demands and property rights of different groups of local people, and the interests of international and national groups seeking to preserve habitats or species for the public good - is the potential for conflict, either as competing claims over natural resources generate strife, or as income gained from valuable natural resources fuels war and civil unrest. In this respect, conflict resolution around natural resources is rising in importance as an area of concern.

## Actions for the future

Any engagement with natural resources and their improved management must be based on a thorough, historically-informed understanding of the political, socio-economic and ecological basis for change (based on a differentiated understanding of vulnerability, poverty and wealth) within the specific country-contexts. Since historical resource injustice lies at the heart of many local and regional conflicts, the bases for these conflicts need to be understood to support the right types of policy and operational interventions.

It should also be built on an understanding of the spatial, social, economic and political interconnectedness of the lives and livelihoods of rural, urban and peri-urban poor. This should recognise that, while natural resources can provide some with improved livelihoods, natural resources alone do not provide a pathway out of poverty.

The fundamentally political nature of any transformation of natural resource rights means that engaging with processes of natural resource policy formulation and implementation must also be a political process. Interventions cannot be delinked from a broader process of thinking about how to engage with issues of poverty and power and meshing this into political and policy processes that facilitate the delivery of more coherent responses to the power dynamics associated with natural resource access and control

Question	Options for public action
Who gets access to and control over natural resources?	Build understanding of how power relations mediate: access to and control over natural resources, technology to improve their use, markets for products, decisions about management (and the effects on different interest groups). Invest in research and development that focuses on pro-poor technologies to enhance productivity from natural resources and improves their marketability. Understand how public action can affect these power relationships, how the nature of the action can either reinforce the existing power relations or transform them in support of poor people. Invest in monitoring systems that can detect inequalities in a real-time sensitive manner. Create space and the capabilities for poorer and excluded people to have a voice and influence over natural resource management choices. Provision of legal and constitutional cover that includes the availability and capacity of justice (formal and non-formal). Recognise the limits to pro-poor NR management and link into other livelihood options and pathways out of poverty - migration, labour market improvements etc.
How can poor people access markets for natural resource products?	Focus on understanding the market conditions that enable poor people to access markets and do not lead to greater capture by those who are more capable. Improve market information, market institutions to strengthen poverty reducing transmission mechanisms such as 1) increasing the demand for locally-produced natural resource products; 2) lowering the entry-costs for natural resource products through improving the regulatory environment; 3) reducing the burden of illegal fees extracted for access to natural resources and marketing of them; 4) developing technologies that improve the market value of NR products; 5) developing the human capital of natural resource users to be more effective in their market access.
How to resolve the conservation versus livelihood dilemma?	Attempts to reconcile conservation and livelihood improvement objectives need to be carried out systematically at site level, clearly identifying both conservation and livelihood outcomes, asking who benefits, and prioritising objectives accordingly. In many contexts the goal of livelihood improvement may conflict with conservation goals and it is important to be clear what changes can or cannot be made in the search for elusive 'win-win' solutions.  Improving the technical management and regulation of resource use is a critical step in seeking to achieve sustainable outcomes: neither conservation nor livelihood improvement can take place where resources are being unsustainably and/or illegally exploited.  Understanding the livelihood context and differentiating between different stakeholders and their connections to a particular resource or locality is important in teasing out how natural resource management for conservation objectives can contribute to particular livelihoods and the form this contribution can take. There is evidence to suggest that small, regular and individualised benefits can lead to important gains for the chronically poor (as opposed to large, communal benefits).
How to address illegality and injustice?	Use of instruments at international, national and local level to reduce the incentives for illegality. At the international level working through international finance and banking systems to build corporate responsibility for ethical lending. Use of consumer demand to push producers to provide legal and ethically produced products. National level attention to the regulatory framework reducing the regulatory burden and simplifying the monitoring of resource use and allocation.  Attention to the fiscal relationships governing resource allocation and revenue transfers to include decisions about the level of resource rent retention: the share of rents between sectors, the level at which it is extracted and retained, and the use of the rent and by whom. Devolve resource rent

Question	Options for public action
	<p>collection and retention to the lowest elected level possible (e.g. villages, communes) and build systems of accountability and decision-making at these levels.</p> <p>Understanding the historical context to resource injustice and the social implications of addressing these injustices. Using policy, justice systems and operational interventions to address injustice between social groups, between geographical areas and to address inequalities; building socially legitimate forms of property rights that give long-term security and protection of assets.</p>
<p>What types of governance arrangements support pro-poor approaches to natural resource management?</p>	<p>Develop systems of governance that clarify the roles and relationships between central government, local government, civil society and the private sector. This requires a three-way dynamic between an active central government regulating and protecting the interests of poor people, a responsive local government with the authority to respond and deliver services and civil society with an effective voice. Experience shows that entry-points for change cannot be confined to any one level, change is more effective if it is joined-up and non-sectoral, and if is targeted at middle ('meso') and local levels of government as well as at the national and international levels, where appropriate.</p> <p>Natural resource policy-making and especially policy implementation are long-term processes that require credible relationships and alliances to be developed (including among civil society) so as to build a pro-poor consensus and be able to seize 'moments of opportunity' to push for change. Implementation requires particular support through building the capacity of natural resource agencies to respond.</p> <p>An array of aid instruments and flexibility of financing is required to be able to engage in the way that is necessary to effect pro-poor change around natural resources. Budgetary support alone does not permit the necessary level of engagement with the issues and practices (and with all branches and levels of government and with civil and political society).</p>



## Key Texts

**Ecosystems and Human Well-being: Synthesis.** Millennium Ecosystem Assessment United Nations (2005)

Website: <http://www.millenniumassessment.org/en/Synthesis.aspx>

A synthesis of scientific studies conducted under the Millennium Ecosystem Assessment, which was called for by the UN Secretary General in 2000 to assess the consequences of ecosystem change for human well-being and the scientific basis for actions needed to enhance the conservation and sustainable use of those systems and their contributions to human well-being. This synthesis interprets findings from scientific studies that provide a wealth of information on natural resource endowments and management issues around the world; five of these studies are also available from the website. The key messages contained in the synthesis paint a bleak picture, to summarise: human activities are placing acute and unsustainable pressure on ecosystems whose full value has to be taken into account as a matter of urgency if we are to reduce human impacts on the planet using the technological capacity at our disposal today. Better protection of natural resources will require co-ordinated efforts across all sections of governments, businesses, and international institutions, with productivity of ecosystems depending on policy choices related to investment, trade, subsidy, taxation, and regulation, among others.

**World Resources 2005 - The Wealth of the Poor: Managing Ecosystems to Fight Poverty.** UNDP, UNEP, The World Bank, WRI. ISBN: 1-56973-582-4

Website: [http://population.wri.org/pubs\\_pdf.cfm?PubID=4073](http://population.wri.org/pubs_pdf.cfm?PubID=4073)

The thesis of WR 2005 is that income from ecosystems can act as a fundamental stepping stone in the empowerment of the rural poor. But for the poor to tap that income, they must be able to reap the benefits of their good stewardship. The report argues that unfortunately the poor are rarely in such a position of power over natural resources due to a range of governance failures. Using a body of statistics and case study data from around the world, this report discusses issues related to ecosystem management, democratic governance, and poverty reduction to consider who controls ecosystems and how this control could be reconfigured to allow the poor to use their natural assets as sustainable sources of wealth creation, vehicles of political empowerment, and avenues of integration into national and global economies.

## Policy Debates



A wide range of policy debates apply to the management of forests, grazing, marine fisheries, inland fisheries, and wildlife. Here we highlight over-arching concerns relevant across resource areas, which are likely to feature prominently in future policy debates.

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### Living beyond our means

There is growing international debate coalescing around the idea that human beings are 'living beyond our means', as a statement from the Board of the United Nations Millennium Assessment Exercise is aptly titled. Ideas and evidence associated with this debate are likely to dominate NRM policy concerns in coming years, whatever position is taken by different and institutional actors. Thus we see grave concerns on climate change, fish stock decline, forest destruction, habitat and biodiversity loss, air quality, and water quality and availability. These processes and how different actors can influence change to minimise human impact on the resource base is the subject of heated debate between scientists, politicians, policy makers, and others.

The **UN Millennium Assessment Exercise** provides a synthesis of evidence for 'living beyond our means', more detailed syntheses are available from the website in the spheres of biodiversity, desertification, opportunities and challenges for business and industry, wetlands and water, and health: Website <http://www.millenniumassessment.org>

### Renewable natural resources in poverty reduction and sustainable livelihoods

The role of natural resources in poverty reduction is highly contested and difficult to generalise across the different resource areas. However a key question is: to what extent can poverty reduction and renewable natural resource (RNR) conservation be made convergent rather than divergent goals? To date, the challenge of reconciling livelihood improvement and RNR conservation in developing countries is daunting and in many contexts unmet. Although generalisation is difficult, there are a set of commonalities concerning the concentration of poorer people in marginal, remote areas - coasts, forests, rangelands - where limited livelihood opportunities and poor environments mean high dependence on natural resources and extreme vulnerability to risks associated with natural hazards.

In contexts where poor people are heavily dependent on natural resources for their livelihoods, processes of globalization, poor returns from commercial agriculture, withdrawal of public subsidies, poor employment prospects, and economic liberalisation are leading to livelihood diversification. For the rural poor, natural resources - non-timber forest products, timber, minerals, fish, bushmeat, etc., can be an important component of these diversification processes. This raises controversial issues about how governments and other agencies should respond to people's attempts to diversify their livelihoods through use of RNRs: can sustainability of the natural resource base be protected while enabling people

to improve their livelihoods? This picture is further complicated by a growing body of evidence to suggest that opportunities for NR exploitation are most accessible to the wealthy and a select few among the rural poor i.e. those in a better position through access to natural resources, education, assets to invest, and market access. Poorer people with fewer assets and less income typically diversify into unskilled labour and activities with low returns; this may cushion against risk impacts but not lead to livelihood improvement.

Questions concerning control over access, revenues, product flows and rights, and the level at which these are held are critical to this debate. But with NR livelihood specialisation the preserve of the better-off, extra-sectoral constraints must be dealt with in tandem with any support geared to improving access and control over NR products and marketing. Across the board it appears the safety-net and insurance function of natural resource products is more significant than their potential as pathways out of poverty.

**Wildlife and Poverty Study** Elliot, J. Grahn, R. Sriskanthan, G. Arnold, C. (2002). DFID: London  
<http://www.dfid.gov.uk/Documents/publications/wildlifepovertystudy.pdf>

**A Framework for Linking Poverty to Policy in the Post-harvest Fisheries Sector.** Output from the Post-Harvest Fisheries Research Programme Project R8111 (2004).

**Natural Resource Management and Chronic Poverty in Sub-Saharan Africa** CPRC working paper 14. Woodhouse, P. (2002)  
<http://www.chronicpoverty.org/pdfs/14Woodhouse.pdf>

**Poverty Alleviation and Tropical Forests - What Scope for Synergies?.** Wunder, S. 2001 *World Development* Vol. 29, No. 11 pp.1817-1833

## Decentralisation – enhancing efficiency and access to RNR?

Processes of decentralisation have been taking place in countries around the world; they are seen as a means to enhance both efficiency and equitable access to NR management by the poor, with work focusing on the development of institutional frameworks to confer rights, responsibilities and roles in decentralised natural resource management. Growing experience of the decentralisation process and a gap between rhetoric and reality is, however, leading to questions about the strengths and weaknesses of decentralisation for reducing inequality and improving poor people's access to natural resources.

Why should decentralisation be expected to lead to greater efficiency in achieving environmental and social outcomes? According to current arguments, efficiency is linked to the broad-based inclusion of local people in public decision making. The idea is that local institutions can better discern and are more likely to respond to local needs and aspirations. This is believed to help improve equity within local jurisdictions through greater retention and more democratic distribution of benefits from local activities. Most reforms however, have been partial and have resulted in privatisation with all the associated problems of exclusion (to groups and individuals) and/or deconcentration - the transfer of power to central government agents in the local arena. Effects of devolution in natural resource management are mixed with thus far limited evidence for substantial change for poorer people and in many instances increased disadvantage to those already marginalised such as women, the very poor and ethnic minorities. Increased elite capture of resources and trading opportunities appears to accompany much of the community-based management. However, it is also clear that community-based management is creating space for civil society voices to challenge and influence government policy, a process that is difficult to undo. It is also evident that effective pro-poor governance frameworks require a three-way dynamic between an active central government regulating and protecting the interests of poor people, local government and civil society. This requires responsiveness within local and central government and the ability of civil society to have an effective voice.

**Sharing Power: Learning by Doing in Co-management of Natural Resources Throughout the World** Borrini-Feyerabend, G. Pimbert, M. Taghi Farvar, A.K. Renard, Y. 2004  
<http://www.iied.org/pubs/display.php?o=9230IIED>

**Waiting for Democracy: the Politics of Choice in Natural Resource Decentralization** Ribot, J.C. 2004, WRI: Washington DC  
<http://pubs.wri.org/waitingfordemocracy-pub-3821.html>

**Devolution and Community-based Natural Resource Management: Creating Space for Local People to Participate and Benefit** Shackleton, S., Campbell, B., Wollenberg, E. and Edmunds, D. 2003 Natural Resource Perspectives No.76.  
<http://www.odi.org.uk/nrp/>

## Conflict over natural resources

Natural resources often lie at the heart of wars and civil strife; they also underpin conflict between different interest groups at the local level. Increasing scarcity of natural resources and unequal access to these resources is only likely to heighten tensions. There are many players in the nexus between natural resources and conflict, with sharp disparities in wealth and power - multinational corporations, state officials, different groups of local people, smugglers, transport operators, mercenaries, and others - and tensions may be played out at different levels.

Examples are legion, and many concern non-renewable NRs, but for instance, at the regional level, water scarcity has important implications for interstate conflict, due to the transboundary flows of many waterways, such as along the Nile Basin. At the national level, rival groups may compete over valuable timber resources, such as in the Congo or Burma, with revenue financing arms and fuelling further conflict. Resource allocation decisions may also lead to injustice that fuels conflict, such as in Indonesia where identity-based resource conflicts are taking place at present. While at the local level, conflict between different land and resource users is common, such as in western Ivory Coast where indigenous tribes and newer settler groups clash violently over cocoa land. Forests, protected areas, coastal resources, inland fisheries, and rangelands all suffer multiple forms of conflict - between existing local users and large-scale commercial interests, between different forms of land and product users, or between primary and secondary right-holders (often men and women, or indigenous and immigrant). Time and again it is the poorest and most vulnerable groups of people who are hardest hit, as those who are more powerful manage to control resource outcomes.

The so called 'resource curse' arguments demonstrate that countries which earn more than a quarter of their GDP from the export of unprocessed natural-resource based commodities are far more likely to face conflict than those countries with more diversified economies, with resources both financing and motivating conflict. Righting injustice over resource allocation decisions is becoming an increasingly important area of conflict resolution particularly in those countries where the state has removed rights from one identity group and given them to another.

**Reconciling Interests Among Wildlife, Livestock and People in Eastern Africa: a Sustainable Livelihoods Approach** Boyd, C. with Blench, R., Bourn, D., Drake, L. and Stevenson, P. 1999. ODI Natural Resource Perspectives No. 45.  
<http://www.odi.org.uk/nrp/>

**Forests and War, Forests and Peace** 2005 In *State of the World's Forests 2005* pp.116-123, FAO, Rome.  
<https://unp.un.org/details.aspx?entry=E05SWF&title=State+of+the+World's+Forests+2005%2C+The>

**The Political Ecology of War: Natural Resources and Armed Conflicts** Le Billon, P. 2001 *Political Geography* vol 20 pp. 561-584

**Herding on the Brink: Towards a Global Survey of Pastoral Communities and Conflict:** an Occasional Working Paper from the IUCN CEESP Nori, M., Switzer, J., Crawford, A. 2005  
UN-associated website on natural resources and conflict:  
<http://www.globalpolicy.org/security/docs/minindx.htm>

## Environmental service payments

The emerging use of market mechanisms particularly for forest environmental services is an area of increasing interest both to deliver developmental as well as environmental conservation benefits. These mechanisms cover global public goods such as biodiversity and climate as well as domestic public goods - such as downstream effects of upstream action. It is still not clear whether such market-based mechanisms can deliver on these two objectives as there is evidence emerging of potentially negative impacts on the poor (particularly those who are landless or with very small landholdings).

There are four areas of current focus: carbon sequestration (through the Clean Development Mechanism), watershed protection (various watershed payment schemes), biodiversity schemes and landscape protection. In all the cases discussed the mechanisms are not truly market-based but remain an uncomfortable mixture of administrative control with limited market freedom. Issues still remain about a lack of willingness to pay for environmental services and the difficulties of constructing mechanisms that are both environmentally beneficial and pro-poor but are not so complex that companies do not choose to engage in such mechanisms. They rely on having governance frameworks that can deliver equitable and accountable outcomes which limits their use to a very few natural resource rich countries.

**How can market mechanisms for forest environmental services help the poor? Preliminary lessons from Latin America** Grieg-Gran, M., Porras, I. and Wunder, S. 2005 *World Development* Vol.33 No.9 pp.1511-1527

## Reducing vulnerability to natural and man-made disasters

Natural and man-made disasters destroy human lives and livelihoods; many of these disasters are associated with renewable natural resources. Disasters have tragic consequences for development and poverty reduction processes, consequences that are felt by the most vulnerable in society (according to identity, ability, gender and age) and exacerbated when disaster reduction policies benefit powerful groups at the expense of the poorest, and when excluded people cannot access the resources and services they are entitled to. The quality of governance has been identified as critical in efforts to reduce the human, economic and natural costs of disasters in both the short and long-term.

Key policy areas include: (i) enabling the most vulnerable people to participate in accountability and decision-making processes regarding potential disaster consequences related to management of NR; (ii) freedom of, and access to, information on policies, rights and major decisions regarding NRM to ensure meaningful participation in disaster reduction; (iii) decentralisation and the question of whether stronger local governance will ensure that decision-making over NR is locally appropriate and takes into account local NR risks; (iv) legally enforceable obligations; (v) access to justice to safeguard the most vulnerable; (vi) accountability to enhance performance over NR management with disaster reduction consequences; (vii) co-operation between disaster, development and NR sectors of government and other agencies to ensure disaster reduction is effective; and, (viii) effective transnational accountability agreements to promote disaster reduction potential of NRM outside a country's borders.

**International Committee of the Red Cross** which produces annual World Disasters Reports:  
<http://www.icrc.org>

**Benfield Hazard Research Centre** with publications and expertise on the complete range of natural hazards and risks:  
<http://www.abuhc.org/Pages/index.aspx>

## Indigenous people, territories and natural resources

The rights of indigenous people to territories and natural resources has been a major policy issue over the last decade and is likely to continue to be one in the future. Indigenous people often live in remote

self-sustaining communities with close dependence on territorial land and natural resources. For indigenous hunters, gatherers, nomads, farmers, herders, fishers and pastoralists a continuing relationship with their natural homelands provides livelihood and food security needs. Typically such dependence on natural resources relies on extensive common property use of these resources. There are however many threats to the lives and autonomy of indigenous people: conflicts arise with other resource users, including the state, wishing to gain access to valuable natural resources such as timber, land or waterbodies, and conservationists wishing to conserve the biodiversity value of particular areas of land. A worldwide movement to protect the rights of indigenous people, and recognising their role in biodiversity conservation has become an increasingly powerful advocacy lobby in recent years, fuelled by UN conventions on human rights, nevertheless at the local level indigenous ways of life and access to territories and natural resources is under extreme threat at the local level in many parts of the world.

**The IUCN Commission on Environmental, Economic and Social Policy:**

<http://www.iucn.org/about/union/commissions/ceesp/>

**Survival International** helping tribal people defend their lives, protect their lands and determine their own futures:

<http://www.survival-international.org>

**Forest Peoples Programme**, supporting indigenous forest people to gain recognition of their rights and control over lands and resources

[http:// www.forestpeoples.org](http://www.forestpeoples.org)

## Illegality and the international response

Illegal, unreported and unregulated trade in timber, fish and wildlife products is a global problem, as well as a national and local issue. In many contexts illegal commercial operations are undermining both the sustainability of the resource base and the livelihoods of the poor, as the natural resources on which they depend are extracted in unsustainable operations. Attempts to change the structures and systems that allow illegality are driven mainly at the international level, with a range of regulatory instruments at governments' disposal (e.g. UN Convention on the Law of the Seas; Multilateral Environment Agreements such as the Convention on Biological Diversity). These frameworks and regulatory instruments obviously differ according to resource, but they emerge from a common concern over species decline and environmental degradation, as well as recognition for the need for governance institutions at the supranational and regional levels, as many resources, commodity chains and impacts are beyond national boundaries.

The other end of the chain - the demand end, the consumer of natural resource products, has become an increasing focus of international attention. Pressure exerted from the consumer end to the producer countries to demonstrate the legality and acceptable social and environmental practices of resource extraction are gaining ground. This includes work with international banking to introduce improved social and environmental lending through the Equator Principles. Questions remain as to the effects of these processes on poorer people and whether sectoral pressure surrounding questions of illegality can effect the necessary political changes to bring about effective governance of natural resources.

**International Finance Corporation's Equator Principles:**

<http://www.equator-principles.com/>

**Review of Impacts of Illegal, Unreported and Unregulated Fishing on Developing Countries MRAG 2005**  
Report prepared for DFID, London.

**Illegal Logging: Who Gains from Tighter Controls** Wells, A. and Brown, D. 2004. ODI Opinions 26

<http://www.odi.org.uk/publications/opinions>

Website on the **Convention on International Trade in Endangered Species of Wild Fauna and Flora:**

<http://www.cites.org>

**Wildlife Trade Monitoring Network** with details on the illegal trade in wildlife products and control measures: <http://www.traffic.org/>



## Further Reading

### Contents:

- [Governance](#)
- [Natural Products and Contribution to Livelihoods](#)
- [Exiting from Natural Resources](#)
- [Natural Resources and Conflict](#)
- [Website Resources](#)

## Governance

### Decentralisation

**Decentralised Natural Resource Management: Lessons from Local Government Reform in India**  
Baumann, P & Farrington, J (2003) ODI *Natural Resource Perspectives* No 86  
<http://www.odi.org.uk/nrp/>

## Natural products and contribution to livelihoods

### Conservation and livelihoods

**Livelihoods, forests, and conservation in developing countries: An Overview** Sunderlin, W.D. Angelsen, A., Belcher, B. Burgers, P. Nasi, R. Santoso, L. and Wunder, S. (2005). *World Development*, Vol. 33, Issue 9

### Fisheries

**Inland Fisheries Keysheet** 2002 ed. J. Farrington, Keysheets for Sustainable Livelihoods, DFID & NORAD

### Forest Products

**Assessing the Potential of Forest Product Activities to Contribute to Rural Incomes in Africa** Arnold, M. and Townson, I. 1998. *ODI Natural Resource Perspectives* No 37 <http://www.odi.org.uk/nrp/>

### Non Timber forest Products (NTPS)

**Global Patterns and Trends in the Use and Management of Commercial NTFPs: Implications for Livelihoods and Conservation** Belcher, B. Ruiz-Peréz, M. and Achdiawan, R. 2005 'World Development' Vol 33 No. 9 pp.1435-1452

### Bushmeat

**Wildmeat, Livelihoods Security and Conservation in the Tropics** ODI 2004

### Wildlife/tourism

A series of articles from the IIED **Biodiversity and Livelihoods Group** concerning wildlife and tourism.  
<http://www.iied.org/pubs/search.php?s=BL>

### Pastoralism

**The Global Drylands Imperative: Pastoralism and Mobility in the Drylands.** Swift, J. 2004 UNDP Challenge Paper

### Environmental incomes

**Counting on the Environment: Forest Incomes for the Rural Poor** Vedeld, P. Angelsen, A., Sjaastad, E. and G. Kobugabe Berg 2004 'Environmental Economics Series Paper No. 98, World Bank, Washington



**From the Mountain to the Tap** Hayward, B. 2005. Forestry Research Programme.

[http://www.research4development.info/pdf/ThematicSummaries/From\\_the\\_mountain\\_to\\_the\\_tap\\_P1.pdf](http://www.research4development.info/pdf/ThematicSummaries/From_the_mountain_to_the_tap_P1.pdf)

## Exiting from natural resources

**The Scramble in Africa: Reorienting Rural Livelihoods** Bryceson, D.F., 2002a. World Development, Vol.30, No.5, pp.725-39.

**Livelihoods and Poverty: Rethinking the Links in the Rural South** Rigg, J., 2006. 'Land, Farming, World Development, vol 34 (1): 180-202

## Natural resources and conflict

**Concessionary Politics in the Western Congo Basin: History and Culture in Forest Use** Hardin, R. 2002 Environmental Governance in Africa Working Paper Series. World Resources Institute, Washington. [http://pubs.wri.org/pubs\\_description.cfm?PubID=3853](http://pubs.wri.org/pubs_description.cfm?PubID=3853)

**The Changing Role of Fisheries in Development Policy** Payne, I. 2000. ODI Natural Resource Perspectives No 59 <http://www.odi.org.uk/nrp/>

## Website resources

### International Institute for Environment and Development

<http://www.iied.org>

The International Institute for Environment and Development conducts research and provides a wide range of information on RNR management in different thematic areas.

### Fisheries Management Science Programme

<http://www.fmsp.org.uk/>

The DFID-funded Fisheries Management Science Programme provides details of research on marine and inland fisheries management, including key policy issues.

### Forestry Research Programme

The DFID-funded Forestry Research Programme provides details of research on forestry management, including key policy issues

### **International Institute for Sustainable Development**

<http://www.iisd.org/natres/>

The International Institute for Sustainable Development provides information and publications on RNRs.

### **Overseas Development Institute**

<http://www.odi.org.uk/nrp/>

The Overseas Development Institute edits a series called Natural Resource Perspectives, which provide current information on a range of policy debates pertinent to RNR management. Their policy research groups cover a range of natural resource themes.

### **Integrated Marine Management**

<http://www.ex.ac.uk/imm/>

Integrated Marine Management (IMM) provides a range of information on fisheries and aquatic resources, coastal development, common-pool resource use especially by remote/marginalised communities.

### **Millennium Ecosystems Assessment**

<http://www.millenniumassessment.org>

Millennium Ecosystems Assessment is an international work program designed to meet the needs of decision makers and the public for scientific information concerning the consequences of ecosystem change for human well-being and options for responding to those changes. It completed its work in March 2005.

### **World Resources Institute**

<http://www.wri.org>

World Resources Institute (WRI), an environmental think-tank based in Washington has a number of major research programmes on natural resources.

### **Food and Agriculture Organisation**

<http://www.fao.org>

Food and Agriculture Organisation (FAO) for a wide range of information on natural resources. Responsible for production of the State of the World reports on forestry and fisheries:

### **Centre for International Forestry Research**

<http://www.cifor.cgiar.org>

Centre for International Forestry Research (CIFOR) conducts research in three main areas: 1) Environmental services and sustainable use of forests; 2) forestry governance; 3) forests and livelihoods.

### **Programme on Forests**

<http://www.profor.info/>

PROFOR (Programme on Forests) is a multi-donor partnership. Website includes a number of interesting studies and operational areas including forest fiscal reform.

### **IUCN - CEESP the IUCN Commission on Environmental, Economic and Social Policy**

<http://www.iucn.org/about/union/commissions/ceesp/>

IUCN - CEESP the IUCN Commission on Environmental, Economic and Social Policy conducts research into a number of natural resource themes concerning policies and practices in environmental conservation: including co-management of natural resources and indigenous peoples and conservation.

## Glossary

**Biodiversity** The relative abundance and variety of plant and animal species and ecosystems within particular habitats.

**Commodity chains** A network of production, trade and service activities, that is functionally integrated, and value creating. It often involves the transformation of a raw material from its extraction, through manufacturing stages, to a specific end product.

**Decentralisation** The dispersion or distribution of government functions and powers, specifically the delegation of power from a central authority to regional and local authorities.

**International public goods** In economics, a public good is a good that is hard or even impossible to produce for private profit, because the market fails to account for its large beneficial externalities. By definition, a public good possesses two properties: it is 'non-rivalrous' - when it has been produced everyone can benefit from it without reducing other's enjoyment; it is also 'non-excludable' - once created it is very difficult to prevent access to the good. An international public good comprises these properties at an international scale.

**Resource rents** Resource rent is an economic term of abnormal or supernormal profit which derives from the exploitation of natural resources. There are two main reasons of the existence of resource rent: The scarcity of the natural resource and the possible impact exploitation will have on natural growth of the resource in future.