Poverty-Conservation Linkages:
A Conceptual Framework

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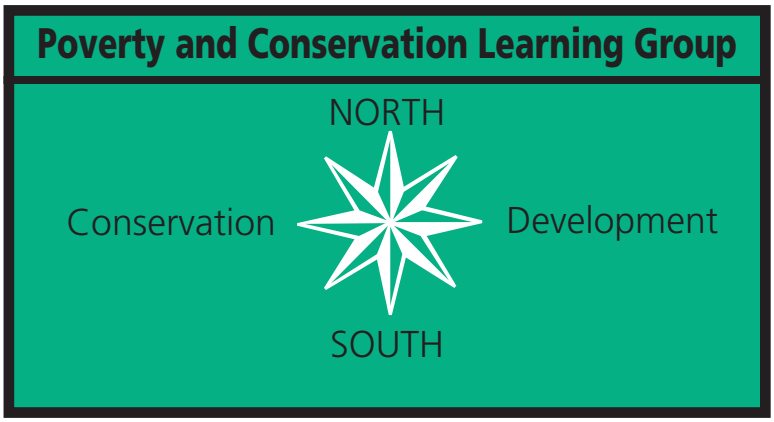

Poverty and Conservation Learning Group

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1. Introduction

POVERTY REDUCTION is one of the international imperatives of the new millennium[1] – an imperative stressed by the Millennium Development Goals (MDGs), the 2002 World Summit on Sustainable Development and, most recently, at the 2005 UN World Summit. The poverty reduction ambitions that have been articulated, while often simply restating development goals that have been set (and missed) over the last 30 years, are unusual in that they now have an unprecedented level of international commitment. As a consequence, all sectors of society are urged to contribute to their achievement. Conservation agencies find themselves among the many organisations struggling to determine how their work could – or indeed whether it should – fit into this international effort.

At the same time, a second challenge faces the international community. Biodiversity loss is proceeding at an unprecedented rate. This loss applies to individual species, habitats and ecosystems. The recently published *Millennium Ecosystem Assessment* provides evidence that the ecosystem services that underpin all life on earth are in a state of collapse. Parallel to the MDGs, international targets have also been set to significantly reduce biodiversity loss by 2010.

Less widely recognised – or understood – are the *critical links between these two challenges*. Biodiversity loss has critical implications for the achievement of poverty reduction goals and vice versa. A recent analysis by the Poverty Environment Partnership (PEP)[2] found that environmental assets account for 26 per cent of the wealth of low-income countries – compared to only 2 per cent in OECD countries.[3] The latest *World Resources* report[4] 2005 emphasises the role that ecosystems can play as a stepping stone out of poverty. Yet few development agencies (governments, donors and NGOs) include biodiversity considerations in their poverty reduction strategies. Just as the development community is urging conservation organisations to take on board poverty issues, so the conservation community is increasingly concerned about the neglect of biodiversity (and environment in general) within many development agencies.

One problem is a lack of consensus on the nature and extent of linkages between biodiversity conservation and poverty (and hence missed opportunities for identifying common causes and common solutions to the two issues). Another is a lack of understanding of how to address these linkages – practical best-bets and a sense of what the real priorities might be. Much depends on the ability to identify and interpret these links effectively. The growing volume of literature and public debate on the subject highlights how complex and context-specific poverty-conservation linkages are, and how subjective is their interpretation.

The conceptual framework articulated here offers a way to understand poverty-conservation linkages. It is drawn from our recent review of published and grey literature and the stakeholder consultation process that has led to the establishment of the new Poverty and Conservation Learning Group, as well as from our own related work. It is intended to be further developed and revised, in particular with regard to feedback from participants in the new Learning Group. The conceptual framework aims to:

- Pinpoint the questions and hypotheses central to current discussions about poverty-conservation linkages.
- Clarify sources of differences in opinion and approach among development and conservation practitioners.
- Identify evidence-based answers to the central

1 Alongside global security and counter-terrorism – which many claim is linked to poverty reduction.
2 The PEP is an informal network of donors, development banks and UN agencies.
3 Pearce, D. W. (2005). The Critical Role of Environmental Improvement in Poverty Reduction. Report prepared for the Poverty Environment Partnership
4 WRI (2005) World Resources 2005: The Wealth of the Poor – Managing Ecosystems to Fight Poverty. World Resources Institute, Washington DC

questions, and the extent to which these are site-specific.
- Begin to highlight gaps in knowledge and evidence, and future research priorities.
- Inform the process of identifying priority policy and institutional responses.

The Poverty and Conservation Learning Group offers an opportunity to cut cleanly and clearly through the differences of opinion to identify where there is real agreement (then help advocate for action), where there is disagreement (then find appropriate fora for discussions) and where there is missing knowledge (then identify the research needed) and support subsequent learning activities.

2. Poverty and Conservation – Definitions and Scope

2.1 What Do We Mean by "Poverty"?

When international agencies talk about "poor people" they are generally referring to the 1.2 billion defined as chronically poor on the basis of an income level of less than one dollar a day. This figure, set by the World Bank, is intended to represent the minimum amount required for a person to meet his or her daily physical needs. This monetary figure is a crude – but easy to measure – indicator of poverty and is currently the basis for defining the scope of Millennium Development Goal (MDG) no. 1 which includes a target to "halve the number of people living in extreme poverty". However, it is a very blunt instrument for measuring a complex phenomenon. Further, people's perceptions of poverty tend to change as countries get richer: in this sense the definition of poverty will always depend on what people, in a particular society, at a particular point in time, perceive as poor.[5] *Inequality* can be as significant a measure of well-being as absolute levels of poverty.[6]

In the 1980 *World Development Report*, the World Bank described poverty as "a condition of life so characterised by malnutrition, illiteracy, and disease as to be beneath any reasonable definition of human decency." Increasing income may help to tackle this condition but is not the only means of doing so. Poverty could also be alleviated by providing poor people with free access to healthcare, education, water and sanitation and so on, or by building up the asset base available to poor people, including environmental assets, so that these support livelihoods and economic growth.[7] More recent definitions have thus tended to move beyond the income focus. The OECD Development Assistance Committee (DAC) recognizes five key dimensions to poverty:[8]

- Economic (income, livelihoods, decent work)
- Human (health, education)
- Political (empowerment, rights, voice)
- Socio-cultural (status, dignity)
- Protective (insecurity, risk, vulnerability)

While supporting this multi-dimensional perspective, we recognise that, for most official agencies and targets (national and international), financial dimensions are still considered the most important and we will seek to address this emphasis wherever possible. We also recognise that there is much debate about the poverty terminology. Many indigenous peoples, while often characterised by many of the conditions described above, object to be classified as "poor" since they consider themselves wealthy in terms of natural and cultural assets.[9] In contrast, many farmers with much land consider themselves to be poor because of their insecurity of tenure over those resources and their lack of access to planning and justice processes. There are also many different categories of "poor" people and different degrees of poverty. Any interventions should therefore be specific about which particular groups of poor people are being targeted.

2.2 What Do We Mean by "Conservation"?

The Poverty and Conservation Learning Group is focusing on the conservation of *biodiversity* (with our understanding of biodiversity based on the CBD definition of *"variability among living organisms from all sources; including diversity within species, between species, and of ecosystems"*). As with the term "poverty", there is no single universal definition of what conservation is or what it entails. Conservation is taken to mean variously an approach to land use, a policy objective, a values set, or an approach to biodiversity management. In broad terms, conservation can be taken to mean the management of renewable natural resources over the long term. However the term has come to be associated with the activities of the major international NGOs and is often synonymous with protection or preservation of a selected range of, often endangered, species and habitats rather than broad scale resource management.

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5 "Poverty and health" on http://www.studentbmj.com/back_issues/0601/education/180.html viewed 1.08.05

6 Angelsen and Wunder (2003) *Exploring the Forest-Poverty Link: Key Concepts, Issues and Research Implications.* CIFOR, Jakarta

7 Pearce (2005) op cit.

8 OECD DAC (2001) *Poverty Reduction Guidelines* Organisation for Economic Cooperation and Development, Development Assistance Committee, Paris.

9 In the context of links between poverty and conservation, however, while not necessarily currently considering themselves as poor some indigenous people do feel that conservation activities could drive them into poverty (A. Argumedo (Indigenous Peoples' Biodiversity Network), pers comm., 16.06.05

Local conservation priorities are likely to be very different to international concepts, focusing on the direct use values of biodiversity and its cultural associations. Distinctions between tame and wild, a crux of western conservation, are also less meaningful to many rural communities, who farm forest gardens or gather food widely. The table below illustrates some of the differences between international and local perceptions of biodiversity – and hence approaches to conservation. Within the Learning Group we seek to encourage clear articulation of values in the process of discussing poverty-conservation linkages. We recognise that different priorities exist and that it will be necessary to explore the trade-offs and synergies between these different values.

Contrasts between international and local biodiversity perceptions and priorities[10]

International perceptions	*Local perceptions*
• Indirect-use (environmental services) and non-use values (option and bequest values) are primary concerns e.g. concerns about threats to endangered species such as tigers, pandas, rhinos. • Ideal of conservation, with or without sustainable use, often associated with a notion of 'wilderness'. • Benefits of, and priorities for, biodiversity management are shared by humankind generally • Endemics (species that occur locally only) and other rare species highly valued • Focus on genotypes (genetic information) • Wild and agricultural diversity treated separately • Focus on biodiversity in protected areas and wilderness	• Direct and -use values (in providing a variety of foods, other uses) as, or more, important than indirect-use and non-use, and indirect use benefits focused around provision of local ecosystem services. • Ideal of sustainable use, with or without conservation benefits • Biodiversity values have immediate ties to people's sense of place and culture, and specific groups have specific priorities • Globally endangered species not necessarily more important than other species • Focus on phenotypes (observable qualities) • No clear boundary between wild and agricultural biodiversity • Focus on biodiversity in multi-use landscapes

3. Different Types of Linkages

That poverty and biodiversity conservation are linked is not a new hypothesis. As early as the 1940s there was increasing recognition that conservation provided revenue-generating opportunities (trade, tourism) that could contribute to local economic development in poor countries.[11] The 1980 *World Conservation Strategy* first articulated the link between conservation and development, while the 1992 Earth Summit put forward the "triple bottom line" concept of sustainable development that encompassed ecological, social and economic sustainability. The headline use of poverty terminology in conservation literature, however, is a recent development[12] and is linked to the priority that development agencies have given to poverty reduction (often appearing to supersede the priority given to sustainable development) since the late 1990s.[13]

At one level, the nature of the linkages between poverty and biodiversity conservation are obvious. We note that in trying to understand the linkages between conservation and poverty it is important to remember that we need to think about both positive and negative linkages, for example:

Positive Linkages

- The contribution that conservation activities can make either directly or indirectly to poverty reduction at a local or national level – e.g. income earning opportunities (jobs, trade,

10 Adapted from Vermeulen, and Koziell (2002) *Integrating Global and Local Values – a Review of Biodiversity Assessment* IIED, London

11 Adams, WM (2004) *Against Extinction* Earthscan, London

12 Although ICDPs often included reference to poverty alleviation as one element of their development objective (see for example Robinson and Redford (2004) "Jack of All Trades, Master of None: Inherent Contradictions Among ICD Approaches" in McShane and Wells *Getting Biodviersity Projects to Work* Columbia University Press). There is also much similarity between the concept of "sustainable livelihoods" promoted in 1992 by Chambers and Conway and widely adopted by DFID and others in the late 1990s and the multi-dimensional construct of poverty articulated in the DAC guidelines.

13 See for example the OECD International Development Targets of 1997, the UK Department for International Development White Paper of 1997 *Eliminating World Poverty*, the World Bank launch of the Comprehensive Development Framework and Poverty Reduction Strategy Papers in 1999 and the United Nations Millennium Development Goals in 2000

enterprise), safety nets for very poor people not able to participate in income-earning, enhanced access to natural resources (for food, health, shelter), safeguarding of traditional rights and cultural values, ecosystem services (clean air and water, fertile soil) and sometimes their trade, attracting international donations for/investment in conservation (worth billions of US$ p.a.).

- The contribution that poverty reduction activities can make to conservation – e.g. relieving direct dependence on natural resources for subsistence use, urbanisation reducing pressure on rural resources, providing incentives for conservation of "useful" species such as medicinal plants, food crops, creating economic base for private sector investment in environmental goods including conservation.

Negative Linkages

- The contribution that conservation activities can make directly or indirectly to poverty creation – or exacerbation. Including reduced access to land, opportunity costs of resource use prohibitions, costs of relocation from protected areas, loss of cultural and traditional values and so on.

- The contribution that poverty reduction efforts can make to biodiversity loss – e.g. land clearance for agricultural development, unsustainable logging; local immigration in search of benefits from conservation. But also just passively – e.g. biodiversity conservation has been delinked from development in many donor agencies, and its continued loss is assumed to have a marginal short-medium term impact on the poor; biodiversity has become a normative concept, assumed by development stakeholders to be defined only in relation to the needs of animal lovers in the north.

We also find it helpful to differentiate three types of relationships within the overall banner of poverty-conservation linkages:

1. A *biodiversity – poor people* relationship – how poor people affect, and are affected by, the availability or loss of biodiversity;
2. A *conservation – poor people* relationship – the impact that conservation activities may have on poor people who live locally and the role that poor people may play in supporting or undermining conservation activities;
3. A biodiversity – poverty reduction relationship – the contribution that biodiversity can make to *poverty reduction efforts* and the role that poverty reduction activities can play in conserving biodiversity or contributing to its loss.

4. What Do We Know About Conservation-Poverty Linkages? Accepted and Contested Relationships

For each of the types of relationship identified above, there are a series of hypotheses underlying differences in the way conservation-poverty linkages are perceived. Below we articulate some of the most common hypotheses for each relationship type, teasing out some of the key arguments and the current state of evidence, and drawing conclusions as to the strength of each hypothesis.

4.1 Biodiversity and Poor People

Hypothesis 1: There is a geographical overlap between biodiversity and poverty

In general terms this hypothesis is correct. The poorer countries of the world are located in the Southern hemisphere, and that is also where the majority of the world's biodiversity is. The geographical overlap is less precise, however, when we move beyond the broad category of "the South". Any list of "poorest countries" will vary according to how poverty is defined at the national level (e.g. by per capita GDP in the World Development Report; by quality of life criteria as per the Human Development Report; or by designation of "Least Developed Country" status). However, in all of these lists, African countries predominate. The so-called Like Minded Megadiverse Countries (LMMC) which contain 60-70% of all biodiversity, include only four African countries (DRC, Kenya, Madagascar and South Africa) as well as eight Latin American (Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Mexico, Peru and Venezuela) and five Asian (China, India,[14] Indonesia, Malaysia, Philippines). The US and Australia are also countries of "megadiversity". Clearly there is no simple linear relationship between areas of high biodiversity and high poverty.[15]

14 If poor countries are identified according to the absolute number of poor people (poverty here measured as an income level of under $1/day) only two countries – China and India – account for over half of the estimated 1.2 billion poor people.

15 See Brackett, D et al (2004), *Biodiversity and Human Livelihoods – The State of the Planet in 2004* UN Millennium ProjectTaskforce on Environmental Sustainability, UNDP, New York (http://www.unmillenniumproject.org/documents/TF6%20IP1%20Biodiversity.pdf) which attempts to correlate ecosystem well being and human well being.

There are also significant geographical differences in levels of poverty and prevalence of biodiversity within a country. One "fact" that is often bandied about is that the majority of "the poor" live in rural areas – which is where most of the biodiversity is. This may be true if "the poor" are measured in monetary terms, but given the huge difference in living expenses in rural compared to urban areas is pretty meaningless when trying to determine where the poor live. "Rural" is also a catch-all term within which exist areas of higher and lower biodiversity. Whether or not these areas coincide with where poor people live is dependent on land tenure arrangements, common property regimes and so on. What is true however, that there is a significant overlap between indigenous territories and the biodiversity "hotspots" or other priority areas defined by international conservation organisations.

The geographical relationship between biodiversity *loss* and poor people is also not straightforward. It is true that most current biodiversity loss is occurring in developing countries – but developed countries have already lost much of their biodiversity. There is also no single indicator of biodiversity loss against which different countries can be measured. Commonly used measures include numbers of threatened species and rates of land conversion or forest clearance. In the latter case, there is some correlation between higher rates of conversion and poorer countries – 7 of the 10 countries with highest rates of deforestation between 1990 and 2000 are African (the other three are El Salvador, Haiti and Nicaragua). This geographical overlap does not necessarily, however, imply any causal relationship (see Hypothesis 3).

Conclusion: At the global level there is a geographical overlap between biodiversity and poor people but it becomes less pronounced the more "the South" is disaggregated. At the national and sub national levels the two occasionally coincide, but governance factors are generally more significant than geography in determining where biodiversity prevails, where poor people live and how the two interact.

Hypothesis 2: Poor people depend on biodiversity

This hypothesis is true: poor people do depend on biodiversity – but so does the rest of humanity. Biodiversity maintains critical ecosystem services such as clean water and fertile soil, it underpins modern medicine, it helps to mitigate climate change and it provides the raw genetic material for modern agricultural varieties. Poor people do, however, appear to be particularly dependent:

- A lack of money may mean that direct use of biological resources – for food, fuel, medicine and shelter – is the only way to meet basic needs. This may be a year-round phenomenon or may be linked to seasonal dips in other assets. It may also be particularly acute at times of stress – drought, illness etc.

- For some people, biodiversity is inextricably linked with identity, culture and spirituality. It is therefore an integral part of their very existence. The majority of people for whom this is the case are categorised as "poor" according to the definitions above.

- It is often the poorest or most marginalized individuals or households that are the most dependent (women, children, the lower castes and so on).[16]

- Because of their dependence on biodiversity, poor people are also particularly vulnerable to, and hard hit by, its loss.

Most studies that have highlighted the dependence of poor people on biodiversity are, however, very context-specific. There is much anecdotal evidence but very little quantitative data and even less that is aggregated at a local, regional or national level.[17] We do know that poor people rely on agriculture: it is estimated that 75 per cent of the world's poorest depend upon agricultural livelihoods, particularly rural women.[18] Gaining a full understanding of poor peoples' dependence on biodiversity requires, therefore, a much better understanding of the role that biodiversity plays in poor people's farming systems. It also requires a better understanding of which groups of poor people are more or less dependent on which components of biodiversity.

Conclusion: All of humanity is dependent on biodiversity for the goods and services it provides, but the poor appear to be particularly dependent (although this is hard to quantify). In a large part this dependency is related to the role that biodiversity plays in poor people's farming systems and the level degree of resilience and adaptability to environmental change that poor people have developed.

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16 See for example, Prescott-Allen, R. and Prescott-Allen, C. (1982). *What's Wildlife Worth? Economic Contribution of Wild Plants and Animals to Developing Countries*. London, IIED-Earthscan; Scoones, I., Melnyk, M. and Pretty, J.N. (1992). *The Hidden Harvest. Wild Foods and Agricultural Systems.* A Literature Review and Annotated Bibliography. IIED, London. Nasi, R. and Cunningham, T. (2001). *Sustainable Management of Non-Timber Forest Resources: A Review with Recommendations for the SBSTTA*. Montreal, Secretariat to the Convention on Biological Diversity. Rietbergen, S, Bishop, J and Mainka, S (2002) *Ecosystem Conservation: A neglected tool for poverty reduction.* WSSD Opinion Paper. IIED, London

17 Cavendish, W (undated). *How Do Forests Support, Insure and Improve the Livelihoods of the Rural Poor? A Research Note.* CIFOR, Bogor. DFID (2002) *Wildlife and Poverty Study.* Department for International Development, London

18 See for example, McNeely, JA and Scherr, SJ 2003. *Ecoagriculture*. Washington: Island Press. DAC Pov Net 2003. *Draft framework for enabling pro-poor growth through agriculture.* OECD-DAC Network on Poverty Reduction.

Hypothesis 3: Poor people are responsible for biodiversity loss

Poor people's dependency on biodiversity brings with it a theoretically strong incentive to conserve. Indeed, most traditional societies have belief systems and practices that demonstrate such an interest and many stories can be found of successful local conservation initiatives. Common property management has often proven to be an effective means of biodiversity conservation, but regimes are breaking down in response to processes of globalisation, inappropriate policies, and a host of threats from wider economic and political forces. Insecurity of access and tenure rights over biodiversity means that poor people can be driven to over-exploit through an overwhelming priority to meet immediate needs. In many cases, poor people are forced to live in the most marginal and degraded of lands. In these cases resources are readily degraded and even low levels of exploitation can lead to permanent loss. In other cases, however, the state of the environment is very much a snapshot in time and an area that is perceived as degraded may in fact be part of a long-term cycle of exploitation and re-growth.[19]

The role of poverty as the key driver of biodiversity loss was put forward in the Brundtland Report of 1987 – *Our Common Future*. This report argued that poor countries and poor people degrade their environment through over-use of natural resources. The WWF report Root Causes of Biodiversity Loss suggests that the problem is "the paradox of current development models" which promote natural resource-based economic development at the expense of sustainability. It argues, however, that poverty is only one of a number of factors perpetuating these models. Correlations can also be shown with inequality, population pressure, international investment models and trade regimes, and inadequate policies and institutions. There is also considerable debate about the role of the rich in fuelling biodiversity loss: richer members of a community or a country tend to have more power to appropriate valuable resources – timber, tourist concessions, hunting quotas etc; richer countries with their considerably higher levels of consumption drive the demand for resources from poor countries (timber, fish, wildlife and wildlife products, etc).

It should also be noted that the root causes of biodiversity loss articulated above have a lot in common with the root causes of poverty – inequality and power, aid and trade regimes, corruption and poor governance. Biodiversity loss and poverty are two linked problems rather than simple causal relationships. The quality of governance appears to be critical to both. Interventions in both arenas have the potential to be mutually reinforcing.[20]

Conclusion: Poverty may contribute to biodiversity loss, but it is only one of a number of factors. Whether poor people conserve or over-exploit biodiversity is dependent on specific circumstances and contexts – and particularly on the influence of external governance factors – and not a question to which a generalised answer can be given.

4.2 Conservation and Poor People

Hypothesis 4: Conservation activities hurt poor people

Answering the question of whether or not conservation activities hurt the poor very much depends on what kinds of conservation approaches are used; and which groups of "the poor" we are referring to. Much of the current debate on the links between conservation and poverty is on the negative impacts that the establishment and maintenance of protected areas have on indigenous and other local communities.[21] Protected areas have, in some cases, resulted in loss of – or reduced – access to land and resources, forced resettlement;[22] destruction of crops, herds and villages; fines and even loss of life. Officially gazetted protected areas are in many cases managed and enforced in military style and traditional practices criminalized. "Parks and protected areas are historically implicated in the conditions of poverty and underdevelopment that surround them".[23] Most recently the focus of the debate has been on the activities of the international conservation organisations (the so-called BINGOs[24]) and their impacts on indigenous people – a debate fuelled by a recent article in

19 Winslow M, Shapiro B, Thomas R, and Shetty S (2004) *Desertification, Drought, Poverty and Agriculture: Research Lessons and Opportunities*. ICARDA, ICRISAT and UNCCD Global Mechanism

20 See for example the 2005 *Environmental Sustainability Index* which demonstrated strong correlation between countries with poor governance and poor environments and Grindle, M. 2002, *'Good Enough Governance: Poverty Reduction and Reform in Developing Countries'*, Kennedy School of Government, Harvard University, Cambridge which highlights the role good governance has in poverty reduction.

21 See for example Adams (2004) op cit; Anderson and Grove (1987) *Conservation in Africa: People, Politics and Practice*, Cambridge University Press, Cambridge; Brechin, S et al (2004) *Contested Nature: Promoting International Biodiversity Conservation with Social Justice in the Twenty-first Century*. Earthscan, London. Chatty, D. and Colchester, M. (2002) *Conservation and mobile indigenous people: Displacement, forced settlement and sustainable development*. Oxford, Berghahn Press. Colchester, M. (1994) *Salvaging Nature*: UNRISD Discussion Paper 55 Geneva; Ghimire, K and Pimbert, M (1995) *Conservation and Social Change*, Earthscan, London; Hulme, D and Murphree, M (2001) *African Wildlife & Livelihoods* Hulme, James Currey Oxford. West P and Brechin S (1991) *Resident Peoples and National Parks*, University of Arizona Press, Tucson

22 See for example Cernea & Schmidt-Soltau 2003. The end of forced resettlements for conservation: Conservation must not impoverish people, *Policy Matters* 12: 42-51; Colchester (1994)

23 See Brockington et al (2005) 'Conservation, Human Rights and Poverty Reduction: A progress report of an ongoing debate', Conservation Biology, 19(4) for a summary of the literature on social impacts of protected areas.

24 Big International NGOs – ie predominantly those based in the US and Europe

WorldWatch magazine[25] and the responses it provoked.[26]

Protected areas are not necessarily bad for poor people. Some protected areas have succeeded in generating significant revenues from tourism. In some cases the revenue has been shared directly with local communities while in others, the presence of tourists has stimulated the development of small local enterprises and provided alternative income generating sources. And not all protected areas result in evictions of resident communities or top-down enforcement. There have been instances where local groups themselves have requested that an area be officially protected in order to protect valuable resources from "outsiders" (eg in Hawaii)[27] or where local communities and governments have entered into a partnership to "co-manage" an area or resource.[28] Protected areas may also encompass indigenous territories or other community conserved areas (CCAs) that deliver ecological, cultural and spiritual benefits to local people. A key issue, therefore, is the common misperception that the term "protected area" implies a zone where people are separated (forcefully if necessary) from nature. In examining the links between protected areas and poor people we need to unpack the concept of "protected areas" and also examine the diversity of contexts in which they are established. Work by Care, IUCN and others[29] will help to clarify both the positive and negative impacts of protected areas.

There is also a misperception that conservation necessarily involves an exclusive approach to preservation or protection, and that it relates primarily to protected areas. In part, this misperception has come about because the focus of international conservation organisations (and associated financial flows) have traditionally tended to be on charismatic mega-fauna (elephants, rhinos, tigers, pandas) and on rare or endangered species, habitats and ecosystems, notably protected areas. Preservation, is however, one of a bundle of conservation strategies, albeit a strategy of last resort that is too often turned to as a first-and-foremost strategy. In fact, much contemporary conservation effort is happening outside protected areas, in complex landscapes of community, private and state owned land, where conservationists have no choice but to partner effectively with landholders to make conservation work in line with local development priorities.

Conclusion: The impacts of conservation activities are not evenly spread. Some forms of conservation activity may have negative consequences for poor people. Others may benefit poor people or even be initiated by poor people. Governance factors appear to be critical once again.

Hypothesis 5: Poor people can undermine conservation

Conservation organisations have often been urged to address poverty on the basis that poor people can undermine conservation: "Much conservation money is still invested with only limited consideration of poverty and livelihoods concerns, despite a growing consensus that poverty and weak governance are two of the most significant underlying threats to conservation".[30] Many examples exist of cases where disgruntled communities have sabotaged conservation projects, killed wildlife and so on because of a feeling of disenfranchisement – or because wildlife has destroyed their crops and eaten their livestock. Involving local people in order to "do conservation better" was the rationale behind many "community conservation" and "integrated conservation and development" projects.[31]

Opinion is, however, divided on whether conservation is indeed doomed to failure if it doesn't take account of human needs or bound to succeed if it does. Brockington (2003) drawing on the example of Mkomazi Game Reserve in Tanzania argues that it is perfectly possible to achieve conservation goals without involving local communities – as long as you're not bothered about the impacts on those people.[32] Critics of community-based conservation, meanwhile, argue that involving local people diverts attention away from conservation objectives – in effect, science criteria are diluted by social and associated economic and political criteria.[33]

In recent years, the argument for involving poor people in conservation has moved from a needs-based approach to a rights-based approach: even if it is not necessary to involve local people in order to do conservation better and to meet their basic needs, respecting their rights to land, resources, cultural identity and so on is a non-negotiable starting point for any activities that affect

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25 Chapin, M (2004) *A Challenge to Conservationists*. WorldWatch Magazine

26 Chapin's article – while criticised by many for factual inaccuracies – encouraged many organisations to review their indigenous peoples policies and resulted in promises to address and perceived wrongs (including most recently at the UN Summit in June 2005).

27 Presentation made at the IIED/TILCEPA side event on governance of protected areas in Montecatini, June 2005

28 See Borrini-Feyerabend G. et al. (2004) Sharing power. Learning by doing in co-management of natural resources throughout the world. IIED and IUCN. London IIED, UK

29 For example see http://www.social-impact-of-conservation.net/; Care International are planning to review the costs and benefits of protected areas in selected countries of Africa and Asia, while IUCN are exploring the development of tools for protected area managers to fully assess socio-economic impacts.

30 DFID (2002) *op cit*

31 See for example Anderson and Grove (1987) *op cit*, Kemf, E (1993) *The Law of the Mother* Sierra Club Books, San Francisco; Pye-Smith, C., Borrini-Feyerabend, G. with R. Sandbrook (1994), *The Wealth of Communities*, Earthscan, London

32 Brockington, D (2003) 'Injustice and conservation – Is "local support" necessary for sustainable protected areas?', *Policy Matters 12*: 22–30

33 See for example Spinage, C. (1998) 'Social change and conservation misrepresentation in Africa.' *Oryx* 32(4): 265–276. Oates, J (1999) *Myth and Reality in the Rainforest*, University of California Press

them – conservation included.

Conclusion: Unless different priorities for biodiversity and incentives for conservation are recognised, local people are often bound to be perceived as "undermining" conservation, and indeed may proceed to do so. Local people need to be engaged to conserve aspects of biodiversity that are critically important to their livelihoods, if broader-based, long- term public support for protection of globally threatened biodiversity is also to be achieved.[34]

4.3 Biodiversity and Poverty Reduction

Hypothesis 6: Biodiversity is irrelevant to poverty reduction

In section 5.1 we highlight the dependence of poor people on biodiversity and the role that biodiversity plays in filling gaps, providing a safety net and providing a means for meeting basic needs without cash or other marketable assets. That biodiversity supports poor people is not in question. Whether it can actually help to lift them out of poverty is, however, debatable.[35] The DFID *Wildlife and Poverty Study*, for example, notes that wildlife-based poverty reduction interventions are only likely to be of significant impact for certain groups of poor people – specifically forest dwellers; those living in or near protected areas; those in wildlife-rich areas of low agricultural potential; those in locations of high tourism potential.

Conversely *World Resources 2005* points out "income from ecosystems can act as a fundamental stepping stone in the economic empowerment of the rural poor". Biodiversity can be an important basis for small enterprise and other income-earning opportunities, but because of huge power deficits and remoteness from markets, poor people tend only to have access to – at least on any commercially exploitable level - low value resources. High value resources – timber, sought-after wildlife species, landscapes with high tourist potential – tend to be appropriated by more powerful, well-connected, interests or alternatively conserved in their interests.[36] Recently, a number of schemes have been developed to generate payments for environmental services including biodiversity conservation. Some appear to have potential for poverty reduction – although differential impacts on different groups of "the poor" are still a cause for concern.[37] And as with any context-specific "success story" a major challenge is still how to scale up and replicate such initiatives. Overall, a distinction needs to be made between biodiversity conservation as a driver of poverty reduction and biodiversity as a resource for poverty prevention – both of which may be equally valid objectives.[38]

The lack of clarity concerning the role of biodiversity in poverty reduction can be witnessed in the changing agendas of international development agencies. Until recently, biodiversity conservation was part of the core programme of activities of donor agencies pursuing the goal of sustainable development. The refocusing of development discourse on *poverty reduction* since the late 1990s – as described above – has meant, however, that in many cases biodiversity conservation has fallen off the development agenda since. It is not perceived to be directly relevant to poverty reduction: it is perceived as too long-term, too uncertain in its outcomes and their distribution amongst the poor, too demanding technically, and moreover not amenable to significant scale-up or upstream policy leverage.

This lack of interest is not just limited to biodiversity – environment generally has rapidly declined on the development agenda. In part this is do with changes in the mechanisms for giving aid. More and more donors are moving away from supporting "projects" and are providing Budget Support to developing country governments – to be spent according to the government's priorities. These priorities are generally articulated in *Poverty Reduction Strategy Papers* (PRSPs), few of which feature biodiversity or the environment in a significant way.[39] This is in part due to the fact that biodiversity goods and services are not reflected in national accounts and so tend to be overlooked. It is also – as discussed above – because of inadequate qualitative and aggregate data on the importance of biodiversity to poor people.[40]

The Millennium Development Goals currently provide the guiding framework for international development Biodiversity *can* make a critical contribution to the achievement of the MDGs – particularly those associated with hunger, health and environmental sustainability – but other interventions may be more effective in achieving those goals. And despite over a decade of thinking on sustainable development, environment is separated into one of eight goals rather than being integrated across the goals. Within the environment goal are three targets and only one half of

34 Scherr (2003) Hunger, Poverty and Biodiversity in Developing Countries. http://www.futureharvest.org/news/hunger_poverty.html Viewed 1.8.05

35 For example, see Cavendish (undated) *op cit*

36 Although there are clearly specific examples from all around the world of poor people gaining more secure rights over biodiversity and being able to engage in lucrative enterprises including tourism, wildlife trade etc.

37 See Grieg-Gran, M and Bishop J in Roe, D (2004) The MDGs and Conservation. IIED, London

38 This argument is made by Angelsen and Wunder (*op cit*) in the context of NTFPs but applies equally to biodiversity.

39 See for example Bojo, J and Reddy, R.C. (2002) *Poverty Reduction Strategies and Environment* Environment Department Paper no 86, World Bank, Washington DC

40 However, it is notable that the Participatory Poverty Assessments, intended to fuel a PRS's identification of priorities, often do reflect poor people's concern about environmental and biodivsersity losses and dependences. Perhaps the issue is who interprets these PPAs.

one of these targets deals with biodiversity loss: "Integrate the principles of sustainable development into country policies and programmes; and *reverse the loss of environmental resources*" (Target 9). Not only is there no recognition of the links between environment and the other goals, within this one target there is no recognition of the links between its two parts – i.e. that integrating sustainable development principles is necessary in order to reverse environmental losses.[41]

Confusion about the relevance of biodiversity to poverty reduction is also related to uncertainty as to the relationship between biodiversity and ecosystem services. The recently published Millennium Ecosystem Assessment notes "In all regions, and particularly in sub-Saharan Africa, the condition and management of ecosystem services is a dominant factor influencing prospects for reducing poverty". Quite how much, and what kind, of biodiversity is required to generate these services is, however, unclear.

Conclusion: A lack of quantitative data – particularly at national levels – make it difficult to challenge the assumption that biodiversity is irrelevant for poverty reduction. In general, poverty reduction policies tend to rely on agriculture – both at the household level through supporting smallholder farmers for their subsistence and income-earning potentials, and at the national level through agriculture's potential to drive economic growth. Making a better case for biodiversity in poverty reduction therefore means clearer articulation of the links between biodiversity and agriculture and between biodiversity and ecosystem services (those that support agriculture and those that generate other benefits).

Hypothesis 7: Poverty reduction activities can cause biodiversity loss.

We noted above that poverty is only one factor driving biodiversity loss. Reducing poverty will not necessarily, therefore, lead to biodiversity conservation unless the other drivers are also addressed. But can reducing poverty actually *contribute* to biodiversity loss? Many commentators are concerned with the impact that current models of economic development – in the name of poverty reduction – have on biodiversity.[42]

Agriculture – the focus of rural development strategies for the last 50 years – has increasingly expanded into previously uncultivated areas, while forestry and fishing industries have "mined" natural stocks almost to oblivion in some cases. Sanderson (2005) highlights particular concerns with potential impacts of agricultural trade liberalisation on biodiversity. Infrastructure too, while vital for economic growth, often has devastating impacts on the environment. Road building in particular, while providing poor communities with better access to markets, schools, hospitals and so on, also entails significant land clearance, causes habitat fragmentation and opens up new areas for resource exploitation – both by local people, immigrants and commercial companies.

The relationship between economic development and environmental quality can be described in the form of the Environmental Kuznets Curve (EKC). This shows that environmental quality declines as income rises until income reaches a certain level. The extent to which this relationship applies to biodiversity is unclear, but economist Tim Swanson highlights the apparent incompatibility between biodiversity and development: "states with high material wealth have low biodiversity wealth and vice versa".[43]

The impact of poverty reduction on biodiversity at the local level is equally ambiguous. Just as it is not clear that poor people degrade their environment *because they are poor* there is little evidence that increasing incomes affects the way in which poor people exploit natural resources. Issues of governance, security of land tenure and access to resources are likely to have a significantly greater impact on the way in which people over-exploit now or conserve for the future.[44]

Conclusion: Historical patterns of rural development – based on primary commodity production – have not performed well for biodiversity – nor, in many cases have they performed well for poor people either. Innovative approaches to poverty reduction that are founded on local knowledge, institutions and processes are critical – both to achieving the MDGs and tackling biodiversity loss.[45]

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41 Promoting the role of environment in achieving the MDGs is the focus of the Poverty Environment Partnership

42 See for example, A. Wood, P. Stedman-Edwards, and J. Mang, editors. 2000. *The Root Causes of Biodiversity Loss*. World Wildlife Fund and Earthscan Publications Ltd., London, UK., Sanderson, S and Redford, K (2003) Contested relationships between biodiversity conservation and poverty alleviation. *Oryx* 37 (4); Sanderson S (2005) Poverty and Conservation: The new century's "peasant question"? *World Development* 33(2)

43 In Koziell and Saunders (2001) *Living Off Biodiversity: Exploring Livelihoods and Biodiversity Issues in Natural Resources Management*, IIED, London

44 See for example Grimble R. et al (2002), Poor people and the environment: issues and linkages, Natural Resources Institute ; Angelsen A. and Wunder S., (2003) op cit ; Reed, D. (2001). Poverty is not a number, the environment is not a butterfly, WWF MPO, Washington DC. Gutman P. (2001). Forest conservation and the rural poor: A call to broaden the conservation agenda, WWF

45 See for example Bigg and Satterthwaite (2005) *How to Make Poverty History – The Role of Local Institutions in Meeting the MDGs*, IIED, London

6. Moving Forward – the Role of the Poverty and Conservation Learning Group

Already we can identify several key areas where evidence is insufficient to support or reject hypotheses as to the existence of linkages:

- Aggregate, national level linkages: does biodiversity conservation contribute a net gain or loss to national government coffers? Does this vary greatly between countries? We just don't have the data to be able to answer this question. The World Bank in its 'Wealth of Nations' (1995) values the products of nature (timber, etc) but not its ecosystem services. How is biodiversity reflected in green accounts?

- What are the different costs and benefits of protected areas and other conservation approaches? Clearly conservation costs, both directly in terms of the costs of running PA systems, for example, but also indirectly in terms of the opportunity cost of using protected land for local livelihoods and other economic opportunities. However, the benefits may also be significant, and even the quantifiable benefits (e.g. tourism) appear not to have been measured as yet. The PEP study concluded that a key knowledge gap is the distributional economics of biodiversity benefits, particularly in new forms of payments for environmental services (PES).

- How much – and what kind – of biodiversity is necessary to make a real contribution to poverty reduction? And how much biodiversity loss – in the name of poverty reduction – can we sustain? How should efforts to conserve biodiversity be prioritised, given that further biodiversity loss is inevitable?

- Which particular groups of "the poor" are more or less dependent on biodiversity? What is the real spatial overlap between poor people and biodiversity?

- One of the more tangible contributions of biodiversity to poverty reduction appears to be the provision of ecosystem services.[46] The link between number of species and extent of habitat with the provision of ecosystem services is, however, unclear. How much biodiversity is enough?

The Poverty and Conservation Learning Group aims to synthesis existing knowledge and new research findings within the context of this conceptual framework in order to consolidate what we do know and clarify where there are clear knowledge gaps or contradiction. It will generate an annotated bibliography for all to access, will review case studies, will create an electronic forum for identifying and discussing key issues and developing research themes, and, most important of all, will help link the different groups, projects, networks and initiatives currently focussing on these linkages across different countries and regions of the world.[47]

A general lack of coherent data, information, knowledge and informed debate underlies the recurrent disconnect and/or discord between those working on poverty reduction and those working on biodiversity conservation (as well as those observing conservation – poverty dynamics). We hope the Learning Group process will do much to rebuild bridges by providing a platform for sharing knowledge, debating assumptions and building consensus around key actions.

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46 See the Millennium Ecosystem Assessment synthesis and biodiversity reports

47 See the Learning Group structure paper for full details of the type and scope of activities planned

Poverty and Conservation Learning Group

The Poverty and Conservation Learning Group is an initiative coordinated by IIED and funded by the Ford Foundation. The Learning Group is intended to address a number of problems:

- The apparently growing divide between conservation and development practitioners and policy makers on how – and whether – to link biodiversity conservation with poverty reduction;
- The potential duplication of effort by a number of different organisations that are grappling independently with the problem of linking conservation and poverty reduction;
- The lack of an established forum through which participants from a range of backgrounds can participate on an equal footing to share and analyse emerging experience in conservation-poverty linkages and identify knowledge gaps and research needs.

The goal of the Learning Group is thus to facilitate learning on conservation-poverty linkages between and within different communities of interest.

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