

Wildlife and Poverty Study

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Prepared by the Livestock and Wildlife Advisory Group
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P R E F A C E

This is the final report of a one-year Wildlife and Poverty Study, prepared by a team co-ordinated by Joanna Elliott of DFID's Livestock and Wildlife Advisory Group. Richard Grahn, Gayathri Sriskanthan and Catherine Arnold were lead researchers.

The Study has been guided by a Steering Committee comprising Caroline Ashley (Overseas Development Institute), Glyn Davies (Zoological Society of London), Linda Brown (Environment Policy Department, DFID), Tamsyn Barton (Social Development Adviser, DFID), Liz Ditchburn (Adviser, DFID Tanzania), Gavin MacGillivray (Enterprise Development Department, DFID), Sandy Moss (Environment Policy Department, FCO) and Caroline Rigg (Global Wildlife Division, DEFRA).

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ACRONYMS

ADMADE	Administrative Management Design (Zambia)
AWF	African Wildlife Foundation
BCN	Biodiversity Conservation Network
BSP	Biodiversity Support Program
BWG	Bushmeat Working Group
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CAP	Country Assistance Papers
CASS	Centre for Applied Social Science (Zimbabwe)
CBD	Convention on Biological Diversity
CBNRM	Community Based Natural Resource Management
CBWM	Community Based Wildlife Management
CEPF	Critical Ecosystems Preservation Fund
CI	Conservation International
CITES	Convention on International Trade and Endangered Species
CPR	Common Pool Resource
CSP	Country Strategy Paper
CSR	Corporate Social Responsibility
DEFRA	Department for Environment, Food and Rural affairs
DFID	Department for International Development
EPINT	Environmental Protection International Division (DEFRA)
ESRC	Economic and Social Research Council
FAO	Food and Agriculture Organisation
FCO	Foreign and Commonwealth Office
FFI	Fauna and Flora International
GEF	Global Environment Facility
GPG	Global Public Good
GrASP	Great Apes Survival Project
GTZ	German Technical Co-operation
GWD	Global Wildlife Division (DEFRA)
HIPC	Highly Indebted Poor Country
ICDP	Integrated Conservation and Development Project
IDS	Institute of Development Studies
IIED	International Institute for Environment and Development
IMF	International Monetary Fund
IPG	International Public Good
IUCN	World Conservation Union
LIRD	Luangwa Integrated Rural Development Project (Zambia)
LWAG	Livestock and Wildlife Advisory Group
MDG	Millennium Development Goal
NGO	Non-governmental Organisation
NRI	Natural Resources Institute
NTFP	Non-timber Forest Product
ODI	Overseas Development Institute
PEAK	Pathways for Environmental Action in Kenya
PPA	Participatory Poverty Assessment
PPA	Programme Partnership Agreement
PPT	Pro Poor Tourism
PRSP	Poverty Reduction Strategy Paper

RLD	Rural Livelihoods Department
SCF	Save the Children Fund
STI	Sustainable Tourism Initiative
TCF	Tourism Challenge Fund
TEV	Total Economic Value
TSP	Target Strategy Paper
UNDP	UN Development Programme
UNEP	UN Environment Programme
USAID	US Agency for International Development
WB	World Bank
WCS	World Conservation Society
WFP	World Food Programme
WMA	Wildlife Management Area (Tanzania)
WSSD	World Summit on Sustainable Development
WTTC	World Travel and Tourism Council
WWF	World Wide Fund for Nature
ZSL	Zoological Society of London

EXECUTIVE SUMMARY

1. The Wildlife and Poverty Study aims to assess how and why wildlife is important to the livelihoods of the poor and vulnerable, review the key underlying policy and institutional issues, investigate the synergies and trade-offs between donor strategies and draw implications for appropriate strategy and intervention. The Study is intended for a wide audience including donors, policy makers and conservation organisations.

2. **Since the mid-1990s, wildlife-linked work has been receiving less attention within the UK Department for International Development (DFID).** DFID now funds only two bilateral wildlife projects (Mbomipa in Tanzania, which finishes this year, and WILD in Namibia) and a handful of wildlife-linked forestry projects, with none in the pipeline. The work on pro poor tourism funded through the Business Linkages Challenge Fund, some research projects and the new Programme Partnership Agreement with WWF-UK represent the only recent sources of new DFID wildlife investment. The reasons for the decline in DFID wildlife investment include that wildlife is generally not seen as central to poverty reduction; the move away from projects to budgetary support as the primary vehicle for delivering aid; growing internal and external questioning of the extent of conservation-development win-wins; concerns about the negative impact of conservation on poor people; the high transaction costs of community-based projects, particularly in remote and marginal areas; and the allocation of responsibility for wildlife conservation within UK Government, with the Department for Environment, Food and Rural Affairs (DEFRA) taking primary responsibility for species conservation and related conventions such as the Convention on International Trade in Endangered Species (CITES) and the Convention on Biological Diversity (CBD).

3. **The Study investigates the evidence for wildlife-poverty linkages and concludes that it indicates significant dependence of poor people on wildlife for livelihood and food security, particularly through bushmeat and tourism.** In Section 2 we identify the limited aggregate evidence available, and explore the anecdotal evidence, including that from six DFID-funded case studies, underlying this conclusion. Of the estimated 1.2 billion people who live on less than the equivalent of one dollar a day, about 250 million live in agriculturally marginal areas, and a further 350 million live in or near forests, of whom an estimated 60 million are indigenous people living in forests. The Study estimates that as many as 150 million poor people (one-eighth of the world's poorest) perceive wildlife to be an important livelihood asset.

4. **Poor people in remote, marginal and forested areas have limited livelihood opportunities.** For many a significant proportion of their food is hunted or collected from the wild, particularly in times of stress, such as drought. Medicines, fuel and building materials are collected from the wild. Poor people use wild resources to build and diversify their livelihoods, whether through trading (e.g. honey), supplying inputs (e.g. handicrafts to the tourism industry), or formal and informal employment. Wild resources are often key to local cultural values and tradition and contribute to local and wider environmental sustainability. Poor people bear the costs of living with wildlife, particularly in terms of threat to lives and livelihoods (e.g. through crop destruction, disease risks and livestock predation). Conservation initiatives that service the 'international public goods' characteristics of wildlife also often come at the expense of poor peoples' livelihoods; both directly in terms of unfair distribution of net benefit flow from conservation and indirectly from the opportunity cost of land.

5. **The steady decline in wildlife populations causes stress to poor people.** Where wildlife is declining or access to wildlife is denied, poor people adapt, but often at a cost to their livelihoods in terms of reduced income, fewer livelihood diversification opportunities and increased vulnerability. Decline in access to wildlife resources is often associated with a decline in poor people's access to forest resources generally, and thus is an indicator of additional stresses.

6. **For some marginalised areas the potential for wildlife to be a source of long-term competitive advantage is underestimated.** As wildlife scarcity increases, so the intrinsic and commercial value of remaining reserves increases, thus increasing the opportunities for the poor to build viable wildlife-based livelihood strategies

7. The Study identifies **major challenges** to those aiming to bring about both poverty reduction and sustainable wildlife use:

- To **ensure that the poor, as compared with government and the private sector, capture a fair share of the economic and livelihood benefits of wildlife**, particularly those from tourism.
- To **ensure that where poor people depend on wild resources, these are not overexploited at the local level**, given that wildlife is a common pool resource and requires collective action to ensure its sustainable management.
- To address the role of **wildlife as an international public good**, where the challenges are to ensure that the costs of supplying wildlife as an international public good are not borne excessively by the poor, that it is not underemphasised at national policy level, and that the supranational governance and funding mechanisms are in place to ensure that it is not 'under-supplied'.
- To **enable effective collective action**, recognising that the creation of new civil society structures to enable effective collective management tends to be expensive, time consuming and difficult.

8. Having concluded from the evidence available that wildlife-dependence of poor people tends to be high where they have access to wildlife-rich areas, the Study then explores the **scope for wildlife-based approaches to contribute to poverty reduction** through four themes: community based wildlife management, pro poor wildlife tourism, sustainable bushmeat management and pro poor conservation (addressed in Sections 3-6). The lack of quantitative data makes it hard to estimate the scale of poverty impact through each of these four themes. From the findings, it is unlikely that the scale of potential impact would make wildlife-based interventions in general a priority over, say, those to support agriculture-based livelihoods. However, **the scale of actual and potential impact is likely to be high enough to warrant intervention for specific groups of poor people, notably forest dwellers; people living adjacent to protected areas; those in remote wildlife-rich areas; and those in high tourism potential countries.**

9. The livelihood impact of many **community-based wildlife management (CBWM)** initiatives has been disappointing, particularly in terms of delivering economic benefits to the household level. The reasons for this included the fact that many CBWM initiatives have been led or funded by organizations primarily in pursuit of conservation objectives. Evidence shows that CBWM has brought significant employment and income generating opportunities to some remote communities, notably through wildlife tourism, for example at household level in Namibia and at district level in Zimbabwe. Evidence also shows that CBWM initiatives have delivered significant empowerment and governance impacts and improved well-being – communities place a high value on having control over their wildlife resources. However, CBWM faces significant constraints, including high barriers to entry for communities and high transaction costs for donors. The extent to which development-led CBWM, designed to deliver livelihood benefits at household level, can help trigger broader rural development, particularly for the remote poor, is not yet clear. This warrants further investigation, and is the subject of ongoing DFID-funded work in Namibia and Tanzania.

10. **Tourism** is the fastest growing industry in the world, and tourism in developing countries is growing twice as fast as that in the rest of the world. Wildlife tourism presents a major source of future comparative advantage for some poor countries, including many in southern and eastern Africa. However, with the exception of community-based tourism, the bulk of tourism still marginalises poor people. The challenge is to test and apply mechanisms for increasing the share of the poor in tourism value added through 'pro poor tourism', particularly in terms of creating the incentives and opportunities for improved private sector participation contribution to poverty reduction. These approaches are fairly new, but the evidence to date indicates that they may offer significant potential for impact on poverty, and should be supported.

11. **Bushmeat** appears to be a key food and livelihood resource for many poor people in forest and rangeland areas, though the informal, and often illegal, nature of bushmeat harvesting and consumption makes the scale and strength of poverty linkages less than clear. Bushmeat research has tended to be driven by conservation rather than livelihood concerns, and livelihood linkages are therefore still not well understood. What is clear is that the dynamics of the trade are complex and differ greatly between areas and land use types. Poor people in agricultural areas in countries such as Ghana and Malawi rely on crop pests, from rodents to small antelopes, for food and income. Dependence on bushmeat increases in times of stress, such as famine, drought and economic hardship, and the declining availability of wild foods is increasing poor peoples' vulnerability to stress, and yet the implications of this are neither understood at national level nor fed into the relevant policy processes. Concerns about the bushmeat trade have tended to focus on natural and managed forest areas, home to rare and endangered species threatened by the trade. Evidence suggests that the scope for sustainable management of bushmeat is limited, except where integrated into community forest management.

12. **Pro poor conservation** addresses the need to ensure that poverty issues are integrated into the work of the leading conservation agencies. The World Bank has built up a portfolio of conservation projects worth about \$2 billion over the past decade. The Global Environment Facility has a portfolio of more than 400 biodiversity projects in 140 countries worth a total \$5.4 billion and is now embarking on a two-year assessment of the 'human impacts' of this portfolio. The leading conservation NGOs spend tens of millions of dollars on conservation initiatives in developing countries each year. The challenge is to integrate the voice and needs of poor people into efforts to conserve wildlife as an international public good, and to ensure that poor people in developing countries are compensated for the costs they incur in 'supplying' the 'international public good' aspect of wildlife.

13. In Section 7 we review the **policy and institutional issues** governing wildlife-poverty linkages. We present the findings of research into the extent to which the linkages are incorporated into Poverty Reduction Strategy Papers and DFID Country Strategy Papers. We find that there is insufficient evidence to say whether wildlife-related interventions should be any higher or lower a priority than other poverty reduction strategies. However, the fact that wildlife is intimately linked into the livelihoods of millions of poor people, and that the potential for using wildlife-related approaches to enhance livelihoods appears to exist, should be reason enough to ensure that key policy processes, including PPAs, PRSPs, take wildlife into account.

14. In Section 8 we draw out the **general implications for donors, governments, the private sector and civil society** as to the appropriate goals, actions and responsibilities for poverty reduction through each of the four wildlife-poverty themes.

1 Introduction

1.1 Aims

The Study reviews the role that wildlife assets play in the lives of poor people. It is intended for a wide audience including donors, policy makers and conservation organisations. The Study aims to answer the following key questions:

- What are the dimensions of linkages between wildlife and poverty?
- How and why is wildlife important to the livelihoods of the poor and vulnerable?
- What are the key policy and institutional issues that govern access to - and use of – wildlife?
- What are the public, private and donor sector responses to wildlife issues, current knowledge about best practice for cost-effective intervention, and the implications for the poor and vulnerable?
- What are the synergies and trade-offs between donor strategies that reduce poverty versus those that conserve or protect wildlife resources?
- What are the recommendations for appropriate donor and other responses, including for DFID?

Whereas much of the non-DFID world takes a fairly broad definition of the term 'wildlife' (as meaning all wild flora and fauna), DFID has traditionally used the term to refer to mammals and other terrestrial vertebrates. For the purpose of the Study, this narrower definition has been adopted, reflecting the fact that the use of other wild resources¹ by poor people is covered in the work of DFID's specialised environment, forestry and aquatic resources teams.

The Study focuses on the ways in which wildlife is and can be used to satisfy the needs of poor people. The issue of 'biodiversity'², or, in this case the 'variety' of wildlife, is also a concern. For example, declining wildlife biodiversity is an indicator of unsustainable management of wildlife resources and therefore a potential threat to the livelihoods of the poor. Moreover, the single most important commercial use of wildlife (i.e. wildlife tourism) is based on healthy and (fairly) diverse wildlife populations. The Study addresses the issue of wildlife as an international public good, and one in which poor people are very much part of the supply process.

The potential scope of the Study is vast, as wildlife is a facet of many established development themes such as common pool resource management and community-based natural resource management, as well as of emerging themes (in DFID and other donors) such as pro poor rural growth and pro poor tourism. The Study therefore focuses on exploring the potential for poverty reduction through four themes³: community-based wildlife management, pro poor wildlife tourism, sustainable bushmeat management and pro poor conservation.

¹ In the study the term 'wild resources' is used to cover all fauna and flora and 'wild foods' is used to refer to all foods (fauna and flora) harvested from the wild.

² For more on biodiversity and poverty linkages see recent IIED papers (Koziell 2000 and 2001) and the DFID Environmental Policy Department publication titled 'Biodiversity – a crucial issue for the World's poorest'.

³ These four themes were identified and agreed with the Study Steering Committee, early in the Study research process, as those most strongly relevant to wildlife-poverty linkages.

1.2 The DFID Context

DFID policy has changed significantly over the past decade. This change in policy is captured in the Government's first White Paper on International Development (1997), the New White Paper (2000), and the DFID Target Strategy Papers (TSPs) including "Halving World Poverty by 2015" and "Achieving Sustainability". In these papers a clear mandate for DFID has been set - DFID is, above all, committed to helping achieve the UN Millennium Development Goals agreed in September 2000 (see Box 1).

Box 1: UN Millennium Development Goals (MDGs)

The commitment: "we will spare no effort to free our fellow men, women and children from the abject and dehumanizing conditions of extreme poverty to which more than a billion of them are currently subjected."

The goals:

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equity and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria, and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

Ref: www.developmentgoals.org

Since the mid-1990s, wildlife-linked work has been receiving less attention within DFID. Until the mid 1990s DFID was well known for funding conservation as well as development initiatives, including support for protected area systems throughout the developing world (e.g. Kenya, Botswana, Zimbabwe). Reasons for the reduced attention include:

- **Wildlife not seen as central to poverty reduction, particularly as compared with other key sectors such as health, education and agriculture.** DFID measures its impact in terms of poverty reduction and requires that all initiatives it supports directly can demonstrate a clear and direct impact on poverty, which many wildlife conservation projects are unable to do. Wildlife as a livelihood asset is seen as relevant to a small minority of poor people, and, through wildlife tourism, to be an asset that delivers only a small proportion of its value to poor people, with the bulk taken by the elite and the private sector. DFID does recognise that it has a commitment to environmental sustainability (see Box 1), and has actively pursued sustainable natural resource management, particularly of water, forests, fisheries and biodiversity, through international processes, such as GEF (discussed in Section 6) and the recent World Summit on Sustainable Development (WSSD).
- **Move from projects towards budgetary support.** To implement its new strategy DFID is placing a growing emphasis on providing aid through direct budgetary support to partner governments, which should help support the cost-effective provision of essential public services to the poor. Bilateral programme and sector support are likely to continue (e.g. DFID's bilateral forest programmes), as will selective investment in innovative and high-impact projects, but the number of field projects funded will be significantly smaller than in the past.
- **Growing questioning of the extent of conservation-development 'win-wins'.** From the optimism of the post Rio drive for sustainable development, the past few years have seen a swing back to questioning the potential for 'win wins' between conservation and development, in part due to the disappointing performance of flagship projects such as CAMPFIRE in Zimbabwe.

- **Concerns about the negative impact of conservation on poor people.** The conservation agenda is still perceived as being largely pro-wildlife and anti-people by development agencies.
- **High transaction costs of community-based projects.** One reason that DFID is less inclined to offer direct support to community-based wildlife projects is that they are perceived as having high-cost per beneficiary and low-replicability. High transaction costs are generally associated with efforts to reach poor people living in remote areas with low population densities. However, governments are committed to reaching and supporting these people. In terms of replicability, anthropologists tend to argue that there is no generic model for working at the local level. However, experience with supporting private sector-community joint ventures suggests that there are indeed 'economies of learning' for the private sector partners, for the intermediaries and for communities, and therefore, presumably for governments and donors e.g. getting the strategy, culture and approach right the first time takes time, but is then transferable.
- **Joined-up government.** DEFRA now takes primary responsibility for UK Government support for species conservation. Efforts within DFID and between DFID, DEFRA and the Foreign and Commonwealth Office (FCO), to pursue a 'joined-up' approach to wildlife conservation are ongoing, e.g. through the Inter-Departmental Consultative Group on Conservation.

DFID currently funds only two bilateral wildlife-linked projects (Mbomipa in Tanzania and WILD in Namibia) and a handful of wildlife-linked forestry projects, with no new projects in the pipeline. The Tourism Challenge Fund and the new Programme Partnership Agreement (PPA) with WWF-UK have provided the only sources of new DFID wildlife investment in the past three years. Table A1 in Annex 1 lists recent wildlife-related work within DFID, DEFRA and FCO. Table A2 lists recent DFID-funded wildlife work within the Natural Resources Institute (NRI), the International Institute for Environment and Development (IIED) and the Overseas Development Institute (ODI).

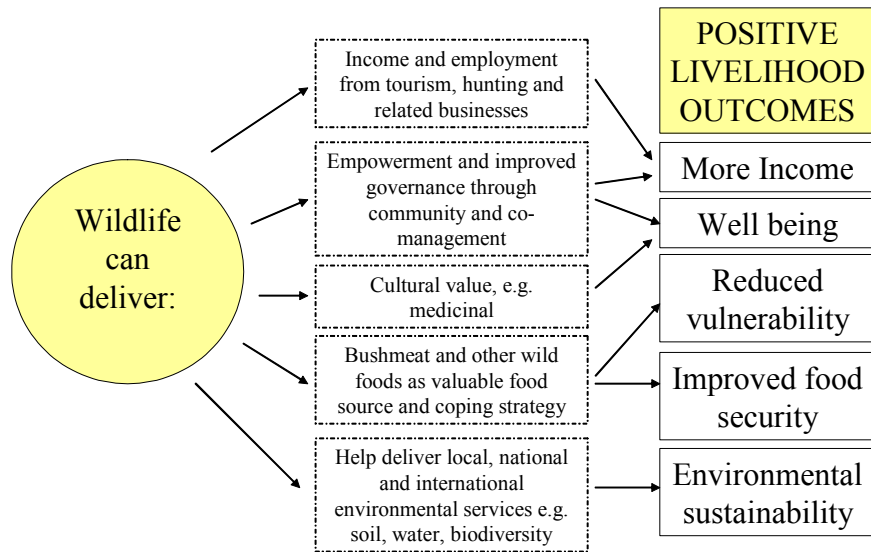
The Study is timely for DFID for a number of reasons:

- **Review of approaches to pro poor sustained rural growth.** This review has included the preparation of *'Better Livelihoods for Poor People: The Role of Agriculture Study'*, now being discussed within DFID. At country level DFID Advisers are expressing a need to explore and understand better the potential sources of growth, particularly in Africa, and the role that wild resources play in pro poor rural growth and enhancing poor peoples' livelihoods.
- **Redefining policy themes.** In DFID Headquarters, the policy departments, including the Rural Livelihoods and Environmental Policy Departments, are in the process of being restructured to improve prioritisation of work and responsiveness to demand. The ten HQ-based policy departments are to be streamlined, provisionally into three budget streams: 'Pro poor Sustainable Economic Growth', 'Pro poor Human Development' and 'Pro poor Social and Political Change'. Thematic teams will be created within and across these three streams to address key short term and long-term policy issues.
- **Conservation-development collaboration.** The process of preparing the Study has coincided with a UK Parliamentary Bushmeat Campaign led by a coalition of UK and US conservation NGOs. The DFID Secretary of State, the Rt Hon Clare Short MP, made the keynote address to the UK Bushmeat Campaign Conference on 28th May, 2002, at which a clear opportunity emerged for renewed conservation-development collaboration for poverty reduction. The World Summit on Sustainable Development (WSSD) confirmed the opportunity for renewed collaboration, generating commitment to over 200 new partnerships between government, NGOs, the private sector and other stakeholders in sustainable development.

1.3 Analytical Framework

The framework for analysing wildlife-poverty linkages is adapted from three conceptual approaches: first, the DFID *sustainable livelihoods approach*, which we use to review the extent to which the poor depend on wildlife and the lessons learned from efforts to use wildlife-based approaches to poverty reduction; second, disaggregating the *total economic value* of wildlife between direct, indirect, option and existence values and their delivery at local, national and international levels, which we use to examine the implications for the distribution of the costs and benefits of wildlife and to differentiate between the value of wildlife as a livelihood asset and its value as an international public good; and third, the role of wildlife as an *international public good*, which we use to review the extent to which national policies fail to accord due value to wildlife, and the need for donors to support supranational governance, enable collective action and ensure the voice and needs of the poor are represented. These are reviewed briefly in turn below.

- **Using the sustainable livelihoods approach** to assess the role of wildlife in poor peoples' livelihoods. The sustainable livelihoods framework helps explain how livelihood assets, such as wildlife, are influenced by policies, institutions and processes, and can be used in poor peoples' livelihood strategies to deliver desired livelihood outcomes.



Note: Wildlife can also lead to negative livelihood outcomes (see Section 2), not captured in this diagram.

Figure 1. Wildlife and Possible Positive Livelihood Outcomes

- **Disaggregating the total economic value (TEV)** of wildlife to understand the distribution of costs and benefits between local, national and international levels. This approach differentiates between direct use values, indirect use values, option values and existence values. Whereas use values can generally be estimated, where data exists, the tools for calculating option and existence values are not very reliable. What we can say is that the costs of supplying and maintaining wildlife are to a significant degree born by the poor (in terms of wildlife damage to crops, livestock and human health, and the opportunity costs of land), whereas some of the most significant benefits, including much of the option and existence values, flow internationally.

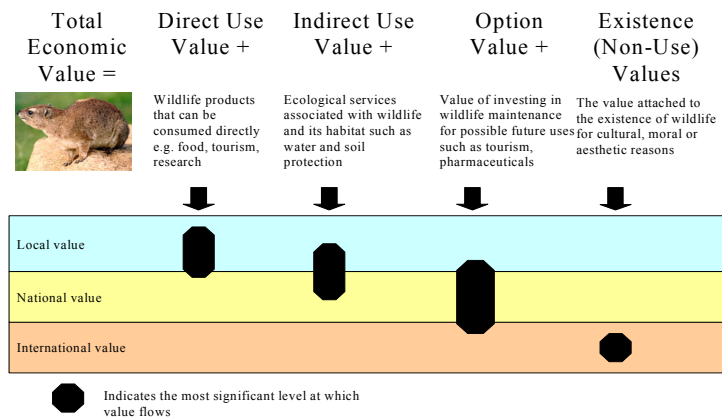


Figure 2. Disaggregating the Total Economic Value of Wildlife

- **Assessing the role of wildlife as an international public good.** International public goods include global public goods such as peace, climate protection and the eradication of smallpox, where the benefits literally accrue globally, and regional public goods that include many forms of cross-border externality such as disease control, river systems, where the benefits accrue regionally but often with no established capacity to manage their supply. International public goods present three major challenges to the international community:
 - **They are associated with national level policy failures.** Local public goods, such as many common pool resources (CPRs), can be addressed at national level, though the costs of collective action may create disincentives for doing this. There is, however, no existing governance system for managing international public goods – governance structures have been built up piecemeal and are incomplete.
 - **They require collective action** to match supply and demand, which is costly and complex. Poor countries will be less able to afford to participate in these processes, so there is a risk that the voice of the poor is excluded from the process.
 - **They are often supplied by poor countries,** thus requiring that pro poor mechanisms be developed for managing international public goods, and that mechanisms compensate the poor for the costs of supplying them.

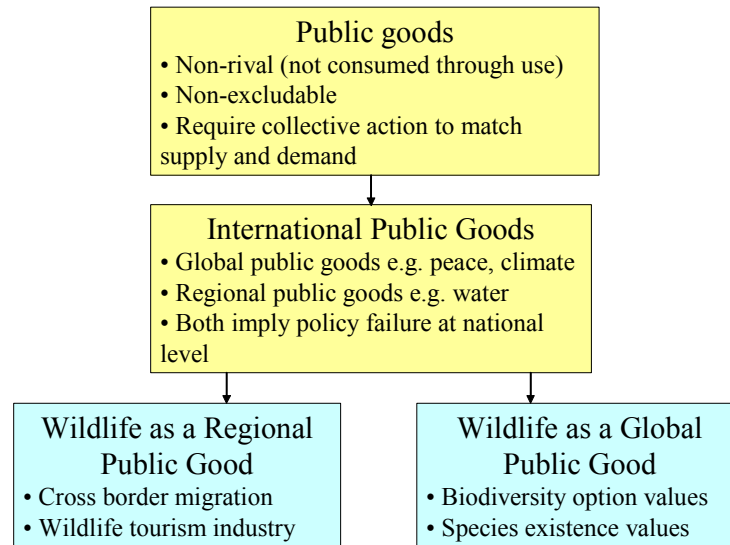


Figure 3. Wildlife as an International Public Good

It is widely recognized by international development agencies that there is an urgent need to improve the supranational mechanisms for managing international public goods. International development agencies in particular are concerned with the need to pay for the associated costs of collective action and compensating the poor for the cost of supplying international public goods (Guillaumont, 2002).

1.4 Approach and Methodology

The research for the Study has been conducted in two phases. The first phase included a period of consultation within and outside DFID, and six case studies of DFID-funded wildlife projects to examine what could be learned from these about the linkages between wildlife and poverty. The findings are incorporated into the Study.

The second phase has been based around desk research and interviews, together with a research study of Poverty Reduction Strategy Papers (PRSPs) and DFID Country Strategy Papers (CSPs, now changing to Country Assistance Papers or CAPs) in fourteen countries, and a programme of interviews with DFID Rural Livelihood Advisers. The main findings of the PRSP research are given in Section 7. Feedback from the Adviser interviews can be found throughout the Paper.

This Study includes the main findings of both phases, examining the four themes in turn, assessing experience to date in leveraging each theme for poverty reduction, reviewing the institutional and policy context and drawing out the implications for the future. The findings are presented in Sections 3-6. The conclusions and implication are presented in Section 8.

2 How Dependent are the Poor on Wildlife?

2.1 Introduction

At the very heart of the Study is the issue of how important wildlife is to the poor. Those interviewed during the course of the research tended to one of three views: either that wildlife is indeed very important to the poor, and that wildlife-based poverty reduction should be a priority for development agencies; or that wildlife is important to the poor, but that the scope for significant poverty reduction through wildlife is limited; or that wildlife is of some importance to some of the poor, but not enough to make it a priority area of action for most development agencies in terms of poverty reduction.

In looking for evidence of wildlife-poverty linkages, we therefore differentiate between two types of evidence – first, evidence of the extent to which poor people are dependent on wildlife, and second, evidence that there are practical mechanisms for working through wildlife to reduce poverty and improve livelihoods. In Section 2 we address the first of these, assessing the available evidence of the extent to which poor people depend on wildlife. In Section 2.2 we review the limited amount of aggregate evidence available, and in Section 2.3 summarize the implications of the extensive anecdotal evidence, using the sustainable livelihood approach as indicated in Section 1.3. In Sections 3-6 we address the second, reviewing the evidence for the effectiveness of wildlife-based poverty reduction interventions for each of four themes.

2.2 Evidence by Livelihood Outcome

2.2.1 Introduction

In Section 2.2 we review some of the extensive anecdotal evidence of the positive and negative roles that for wildlife-poverty linkages by outcome. Table A3 in Annex 1 summarises the key positive and negative linkages identified for each of five livelihood outcomes, as discussed below.

2.2.2 Wildlife as a Means of Reducing Hunger

Anecdotal evidence suggests that wildlife-poverty linkages are often strong and direct for this livelihood outcome. There is considerable anecdotal evidence charting the dependence of many rural households on protein derived from wild animals (e.g. Box 2).

Box 2

In Ghana all species of wild animal are widely accepted as food resource, with no stigma attached to bushmeat consumption – in fact, in many areas bushmeat consumption tends to be an indicator of relative wealth. 75% of Ghanaians eat bushmeat regularly, with wild animals constituting the main source of animal protein for rural communities, though the decline in supply is forcing people gradually to switch to other sources. Cash from bushmeat trading is a major source of income for hunters, usually men, who sell to middlemen, who then sell it in urban markets where it fetches a premium. Poor people, women as well as men, trap a variety of crop pests, from rats to small antelopes, for sale or own consumption. Few people who collect bushmeat actually consume it outside of periods of hardship – most use it as a boost to cash income.

- Bushmeat continues to be a significant source of protein consumed in many African countries. Bennett and Robinson (2000) estimate that wild meat provides more than 50% of protein for many tropical forest peoples. Asibey and Child (1990) reported that bushmeat supplied up to 84% of

protein in some areas of Nigeria, 70% in Liberia and 60% in Botswana. Bushmeat is cheaper than domestic meat in rural areas, so is particularly accessible to the poor (TRAFFIC 2000).

- In terms of nutritional value, wild meat is regarded by some as a better source of protein than domestic meat, with lower fat. Though little nutritional information is available on the value of preserved bushmeat (smoked, salted and sun-dried biltong), which is widely used.
- In certain ecological systems wildlife are efficient users of local vegetation, disease resistant and physiologically adapted to the environment, as well having high growth and reproductive rates (many sources cited in TRAFFIC, 2000). In addition wild resources may offer particular benefits to communities living in marginal areas where domestic livestock is not a viable land use option due to the prevalence of tsetse fly and trypanosomiasis.
- In terms of negative linkages between wildlife and hunger, wildlife can pose a threat to people (physical injury, death), livestock (through predation and disease transmission, as well as competition for grazing and water) and crops (through theft, trampling). One 1996 estimate suggests that 35% of agricultural production costs in the Masai Mara was accounted for by wildlife damage (Norton Griffiths 1996).

The role that wild foods, including bushmeat, play in food security appears to be underestimated, and their importance to different groups is not well understood. They have played a particularly critical role in peoples' coping strategies in times of stress (e.g. mukheit berries in Sudan) but appear to be declining in availability and therefore importance, as indicated in DFID's recent food security strategy paper, *'Eliminating Hunger'*. Good food security monitoring systems pick up information on wild foods regularly and fairly systematically. The role of wild foods is therefore better understood by the World Food Programme, Save the Children Fund (SCF), Oxfam and CARE, than by the sectoral approaches of WFP/FAO crop assessments or national Ministry of Agriculture surveys.

The supply of wild foods to the poor is steadily declining and is a primary cause of lower dietary quality, according to SCF. SCF has done some assessment of the contribution of wild foods to nutrition in southern and eastern Africa, finding that wild foods are still very important in areas such as central South Sudan, where poor people are very skilled at using wild plants when they have to. Across much of the developing world CPRs have traditionally provided the poor with opportunities to hunt for meat, harvest seasonal fruits and catch small lizards and birds, all of which played an important dietary role, as well as other key resources such as fuel wood from village wood lots. The steady loss of common resources has had a major impact on food security and dietary quality. The Ethiopian highlands and Malawi are cited as two areas where dietary quality is believed to have declined steadily, with harvest mice now playing a significant role in the diet of poor Malawians, whereas ten years ago larger rodents and small mammals would still have been available.

All sources cite the need for further research on these issues. For example, we need to know more about the willingness and ability of poor people to substitute other livelihood strategies and protein sources for bushmeat, and to understand better the role of bushmeat and other wild foods in the diets of the poor, with a view to enabling poor people to maintain preferred access to these assets.

2.2.3 Reduced Vulnerability

Evidence suggests that wildlife-poverty linkages play a key role in reducing vulnerability. There is broad agreement that bushmeat and other wild foods are important coping strategies for the poor during times of stress (SCF, DFID's *Eliminating Hunger* paper, IIED's *Hidden Harvest* work from 1992), and that loss of access to wild foods is increasing the stress experienced by the poor in times of drought, famine and conflict. Even insects such as caterpillars, beetles and termites are key food sources in time of acute food shortage (Takeda and Sato cited in Ntiamoa-Baidu, 1997) The development of wildlife-based businesses, particularly tourism, can help increase security at local level, for example close to tourism facilities with guards.

2.2.4 Improved Income

Evidence suggests that wildlife-poverty linkages have the potential to deliver significant income and employment opportunities to poor people. The principal means by which income is generated from wildlife are: consumptive and non-consumptive wildlife-based tourism, wildlife harvesting (including bushmeat), trade in wildlife products, and wildlife ranching and farming.

Box 3

The scale of hunting of wildlife for food, medicines and pets is immense. According to a 1999 study by the World Conservation Society each year more than 1.1 million tons of wild meat comes out of Africa's tropical forests and more than \$11.8 million worth of wildlife is exported illegally from Laos to China; each week Indonesia exports more than 25 tons of turtles.

WCS Website

Nature tourism, including hunting, is a growing industry, though the poor receive a small share of the benefits. There is significant potential for making this sector more pro poor, as is discussed in Section 5. One observed trend is that the conservation organisations including Conservation International and WWF-UK (with Discovery Initiatives) are entering into partnerships with ecotourism operators to facilitate controlled tourism to their sites. There are a growing number of real (equity and management) partnerships between the private sector and local communities, such as many of the facilities operated by Wilderness Safaris in southern Africa. There are also a growing number of organisations such as Tourism Concern, NACOBTA and others that allow consumers to contact 'community tourism' enterprises directly, thereby increasing sales and profits at local level. Significant employment is created through wildlife-based tourism including guiding, cooking, and cleaning, as well as self-employment through related trading opportunities. Communal income for poor communities from tourism is also growing. This includes fee and lease income as well as enterprise profits.

Trading wildlife products harvested from the wild is a significant source of income for many poor people. Generally wildlife products are traded in local markets (e.g. bushmeat), but some products are traded internationally (e.g. live animals as pets, animal parts for medicines). The Convention on International Trade in Endangered Species (CITES) restricts or bans trade in certain rare and endangered species, though few attempts have been made to investigate the impact that CITES has on poor people (Roe et al 2002). Wildlife ranching and farming, as researched by Hofmann et al (1999) for bushmeat, hunting or the live animal trade, are not generally options for the poor because of the high entry costs.

Box 4

One grasscutter is worth ten days wages in rural Ghana (Mackenzie, pers.com.).
One tegu lizard skin is worth a day's wage as a farm labourer in Argentina (Roe, pers.com.).
A typical hunter in Arabuko-Sokoke forest in Kenya earns ten times the average local wage (Bennett and Robinson 2000).

Box 5

Where community based wildlife management initiatives are successful, collective income can vary widely. For example from less than \$5 per household from CAMPFIRE (household dividend in 1996) to \$35 in Pakistan (1997 revenue from Ibex hunting paid to each of 120 households) to \$1,150 in Costa Rica (revenue from turtle eggs paid to each of 200 members of Ostional community in 1996). In Botswana, 230 San families receive \$600 per month each from cochineal.

Cited in Roe & Jack, 2001

Wildlife-livestock interactions can have a positive or negative impact on income. Disease transmission between antelopes/bovids and livestock has given rise to substantial investments in control of Rinderpest and East Coast Fever. Human-wildlife conflict and competition for grazing and water can have negative income effects. Birds (such as weaver birds, waterfowl, parrots and seed eaters) can cause serious damage to crops such as rice, maize, sorghum and palm oil. Elephants, bush-pigs, porcupines, warthogs, baboons, vervet monkeys, eland, kudu and some bird species also cause serious crop damage, with elephants and bush-pigs causing the vast majority of the damage (Ntiamoa-Baidu 1997).

2.2.5 Improved Well-Being

Evidence suggests that this is largely underestimated in reviews of wildlife 'projects' and yet is one of the most important outcomes to poor people, if not the most important outcome. Ntiamoa-Baidu emphasises the influence of wildlife not just on access to food through employment and income generation but its influence on physical, spiritual and cultural well-being. Many communities place considerable value on certain species for their medical properties in the treatment in a variety of ailments from physical and mental illness to antenatal care.

Empowerment, a further non-financial component of well-being, is identified as the most important non-financial benefit generated by CBNRM in Namibia. Jones (1999), in his study of the Nyae Nyae community (a group of mostly San people) in north eastern Namibia, concludes that a major contribution of new community wildlife management Conservancies is empowering communities to establish Conservancies and develop their own undertakings, thereby contributing to tackling the apartheid legacy.

2.2.6 Environmental Sustainability

Wildlife numbers are generally declining because of over-harvesting and habitat loss. Positive linkages exerted by wild animals on food production systems include animals as seed dispersal and pollination agents and wild animal droppings as fertilisers. The importance of animals as seed dispersers is well documented, for example a number of species, including bats, monkeys, baboons and squirrels, are known to disperse the seeds of fruit bearing tree species through their feeding activities (Ntiamoa-Baidu 1997). There is much in the literature on the environmental stresses of bushmeat exploitation in west and central Africa (e.g. Fa et al 2000). The main problems in terms of sustainability are overexploitation of target species, particularly in areas near to larger settlements and the incidental hunting of non-target species where hunting is non-selective. The non-selective nature of hunting is particularly commented on in areas where wire snares have become popular – a high number of animals decompose or are scavenged on the snare (Fa et al 2000).

The protected area systems designed to conserve wildlife are often in place at the expense of poor people, taking away pre-existing traditional use rights and excluding the poor from useful resources. One 1995 estimate suggested that the cost to Kenya of maintaining a system of 61,000 km² of protected areas in terms of revenue foregone was some \$200 million p.a., compared with net returns from protected areas of \$42 million p.a. (Norton Griffiths and Southey 1995).

2.3 Six DFID-Funded Case Studies

As a part of the research for the Study, six case studies of DFID-funded wildlife projects were undertaken, to review what could be learned from them about wildlife poverty linkages. The case studies including wildlife management, tourism and forest management projects: the Mt Cameroon Project in Cameroon, Madikwe in South Africa, Mbomipa in Tanzania, Kunene in Namibia, Amboro in Bolivia and the northern areas of Pakistan. The Namibia and Tanzania case studies were based on fieldwork by the team. The other case studies were conducted from literature reviews and interviews. Full texts of the case studies are available on CD from the Rural Livelihoods Department. The key parameters of the case studies are given in Table A4 in Annex 1. The summary analysis of livelihood impacts for each case study can be found in Table A5 in Annex 1. In summary:

- The case studies suggest that it is possible to **create new wildlife-poverty linkages** (e.g. Madikwe, where wildlife was introduced to a previously denuded area), **strengthen existing linkages** (e.g. Mbomipa and Kunene) and/or **substitute for linkages** (Amboro, where income generating activities have been established from wildlife and non-wildlife products).
- Positive poverty-wildlife linkages appear to be **strongest in semi-arid and forest ecosystems where wildlife densities are high relative to those of human populations** (e.g. Mbomipa and Kunene), where there are limited alternative sources of livelihoods, where the number of beneficiaries is large and where the range of benefits is substantial.
- **Negative poverty-wildlife linkages** (particularly human-wildlife conflict and the opportunity cost of wildlife as a land-use) **are often underplayed** in assessing wildlife-based livelihood opportunities.
- **Linkages are generally complex**, may be direct or indirect, and vary greatly between projects and stakeholders.

A surprising finding from the case studies is the **lack of project specific socio-economic data** that would allow us to analyse the impact of wildlife interventions on poverty and assess the scale of poverty-wildlife linkages. In all of the case studies there has been limited pre-project identification of the poor. In none of the case studies was baseline data available or used to monitor and assess project impact on poverty and livelihoods. This has limited the extent to which the Study can quantify and objectively verify poverty-wildlife linkages.

The case studies confirm that significant numbers of poor people appear to depend on wildlife through:

- **Wildlife tourism:** the Madikwe, Kunene and Mbomipa case studies indicate that the most significant economic benefits delivered by wildlife are employment opportunities, usually through wildlife tourism and hunting, and related businesses. In the case of Mbomipa, communal village income is valued as highly as employment opportunities and appears to make a significant per capita contribution to poverty reduction.
- **Bushmeat:** poor people in both forest and rangeland areas appear to have a higher reliance on bushmeat than is generally assumed, and, as the Cameroon case study indicates, declining bushmeat supplies can present a threat to poor peoples' livelihoods and food security.
- **Conservation:** the linkages between wildlife conservation and poverty are complex and can be positive or negative. Of the six DFID-funded case studies, Cameroon is the only project that maintained an explicit conservation goal.

2.4 Aggregate Evidence

2.4.1 Introduction

‘Despite the obvious contribution of wildlife to the socio-economic life in Africa, there are currently no comprehensive and reliable estimates on total supply, trade and consumption of wildlife in any African country.’ This comment the literature on wildlife utilisation by poor people in FAO’s *Wildlife and Food Security in Africa* (Ntiama-Baidu 1997) remains as valid now as it was five years ago. Not only that, but our review of available published and grey literature, as well as a wide variety of websites, finds that Africa is by far the best-documented region. The lack of data is due to a number of factors: wildlife is a mobile CPR; monitoring is expensive and sometimes difficult and wildlife consumption is often illegal or informal so not reported. For example, little research has been completed that attempts to quantify the benefits of wildlife tourism to the poor (see Section 2.4.2). The best-researched aspect of wildlife use is bushmeat, but even here the livelihood links are not well covered (see Section 2.4.3). Similarly there appears to be little aggregate information about the impact of north-south conservation fund flows on poor peoples’ livelihoods (see Section 2.4.4).

The absence of reliable aggregate data leaves a knowledge gap in the national statistics of developing countries. Development planning in general does not take account of the dependence of poor people on wildlife and of the potential gains for wildlife-based rural development. As Asibey and Child (1990) note, ‘this is a serious omission, with unfortunate consequences for those whose survival is closely linked to wild animals, as a source of food and income’. The result is limited understanding of the role wildlife plays in rural livelihoods.

The research for the Study has not identified any existing estimates of the aggregate scale of wildlife-poverty linkages. Table A7 in Annex 1 gives total human population, a measure of income per capita, the number of people living on the equivalent of less than one dollar per day, plus 5 proxy indicators of wildlife-poverty linkages, for each of 115 countries. No estimates of wildlife densities by area or country were identified, other than for key endangered species and charismatic megafauna, thus making it difficult to identify whom of the marginal poor in each country are actually dependent on wildlife. The proxy indicators are:

- The number of people living on less than a dollar a day in **arid and semi-arid areas**. These areas are generally unsuitable for agriculture, except extensive livestock production in some areas, and therefore wildlife-based livelihoods are more likely to be attractive, where wildlife number and the economic context permits.
- **International tourism receipts**. The research process did not identify readily available data on receipts from wildlife tourism. However, international tourism receipts are one indicator of potential linkages.
- **Forest area** as a percentage of total land area is an indicator of the likely relative importance of bushmeat and other forest products.
- **Protected areas** as a percentage of total land area gives one indication of the likely scale of conservation-poverty linkages.
- The number of **endemic mammal species** for the 50 countries with the highest levels of endemism gives another indication of likely conservation-poverty linkages.

It is estimated that 1.2 billion people are trying to live on less than \$1/day, and that of these 70% live in rural areas. We know that **nearly 250 million of these people live in agriculturally marginal arid and semi-arid areas** (see Table A6 in Annex 1), where crop production is risky. It is likely that, where wildlife exists on any scale, these people count wildlife among their livelihood assets. We know

that **60 million of these 1.2 billion people live in forests, with a further 290 million living adjacent to forests** (World Bank, 2001).

Taking these figures and the data presented in Table A7, we can draw up a rough estimate of the number of poor people for whom wildlife is an important livelihood asset. Assuming that all 60 million indigenous forest dwellers, 20%⁴ of those living adjacent to forests, and at least 15% of those living in agriculturally marginal areas perceive wildlife as a key part of their livelihood asset base, **we estimate that wildlife is an important livelihood asset for up to 150 million poor people.**

2.4.2 Wildlife Tourism

Globally tourism creates more jobs than any other economic sector. According to IDS (Page 1999), tourism represents more than 50% of direct investment in developing countries and is likely to be the principal source of future investment for regions that do not have significant potential for agricultural and industrial activities. In 1980 tourism was only 2% of African exports of goods and services (less than half the world's average) and by 1998 this had increased to 7% of exports (same as the world average) and 4% of GDP (same as world average) (WTTC 1999).

Tourism is growing fastest in developing countries. From 1990-98 visits to the developing world grew twice as fast annually as worldwide tourism (9.5% pa compared with 4.6% pa) and now account for more than 30% of total tourist visits (Ashley 2002). By 1998 tourism was among the five leading export sectors in two thirds of the world's 49 least developed countries, and five countries - Cambodia, the Maldives, Nepal, Uganda and Tanzania -accounted for more than a half of total LDC tourism receipts (Benavides 2001). China has one of the fastest growing tourism industries in the world with growth in nature tourism targeted for both delivering benefits to local communities and generating the cash to pay for nature reserves (Nianyong and Zhuge, 2001).

Box 6

In Kenya tourism is the third largest economic sector after tea and horticulture, providing foreign exchange, employment and taxation revenue. Nevertheless the vast majority of profits do not reach poor rural households and there is little understanding of how the poor do or could benefit from tourism.

Nature tourism is a growth industry. The World Tourism Organisation estimates that 7% of all international travel expenditure is related to nature tourism, and that the nature tourism industry is therefore worth \$83 billion p.a. This is the fastest growing segment within the international tourism market, and continued growth of 5-10% pa is anticipated (WTO 1999, WTO website).

Wildlife tourism accounts for a significant share of the nature tourism industry, though the research was not able to identify any estimates of its actual share. The wildlife 'safari' industry has been central to the development of tourism in southern and eastern Africa, and is an important part of the tourism industry in other countries such as Costa Rica and Nepal. Bird viewing is another specialised sub-segment of the wildlife tourism industry that is growing steadily in countries such as Indonesia. Commercial hunting by tourism of wildlife species is another specialised and high value segment, e.g. trophy hunting in South Africa, Tanzania, Zimbabwe and Zambia contributed an estimated £150 million to the economies of these countries in 1996 (Elliott and Mwangi 1998).

Wildlife tourism is expected to be a future source of competitive advantage for many poor countries, particularly in eastern and southern Africa. The demand for wildlife tourism is increasing,

⁴ The 20% and 15% figures are based on the best judgement of the Study team, given the evidence currently available. These figures will need to be updated as and when further evidence is available, and may be higher or lower than these estimates.

and will continue to increase. Considerable investment is made in improving the wildlife tourism products available in developed countries, in managed protected areas or in theme parks such as Disney's live animal park in Florida. However, there is a growing gap between demand and supply and a growing demand for 'authentic' experience that will continue to create opportunities for developing countries with high quality wildlife tourism products.

Tourism tends to be an **attractive growth sector** for developing countries because it can:

- Have **higher income elasticity** than other traditional developing country exports (people buy more of it as their income increases, unlike demand for 'commodity' products).
- Be more **labour intensive** than some other new investment sectors, and employs a higher percentage of women than many other sectors.
- Create **unskilled job opportunities** and may include opportunities for on-the-job training.
- Have **low barriers to entry**, with tourism businesses ranging from very small to large investments, thus including the informal sector and businesses of the poor.
- Have **high multipliers into local economy** from tourism expenditure.
- Foster **spin-off business opportunities** e.g. laundry, transport, food supply, handicrafts.
- Create development opportunities in **remote and/or agriculturally marginal areas**.

However, **international tourism is a high-risk industry**, with high rates of consumer substitution between products because of differences in quality, price and perceived security issues. Tourism can be a high leakage industry with a high percentage of earnings, wages and profits remitted/retained abroad. Countries with strong domestic tourism segments, such as South Africa, are able to reduce these risks. Another challenge is harnessing the tax potential of the tourism sector, with large numbers of small businesses, many in fairly remote locations, often complex joint venture or group structures and longer than average pay-back periods.

Poor people identify benefits and costs arising from tourism development (Ashley et al 2001). The benefits can include:

- **Opportunities to increase earnings:** through opportunities for employment, enterprises, community collective income (from lease fees, rentals, dividends) and access to credit.
- **Non-cash livelihood impacts:** such as improved infrastructure and health care associated with tourism development, improved security, access to markets, respect for local culture, as well as donations for community assets such as schools, clinics and water.
- **Participation and power:** which may include improved access to and control over resources, a voice in decision making, improved communication and access to information, greater optimism and pride.

Negative livelihood impacts from tourism can include:

- **Lost access to land and other resources:** wildlife tourism ventures in particular often require setting aside areas of land, or the use of resources such as grazing rights on areas of land, for exclusive wildlife use.

- **Exposure to risk:** tourism is generally a high-risk livelihood strategy, most attractive where it offers high returns and complements other livelihood strategies.
- **Exposure to exploitation:** as with other sectors in developing countries, employment in tourism is often associated with low wages, long hours, hard physical activity and long periods of absence from families.
- **Conflict and weakened social infrastructure:** in many communities the potential for tourism investment has led to increased internal conflict and competition, in terms of representation on committees, sharing of employment benefits and the sharing of the income and costs arising.

A key challenge is to increase the share of the poor in benefits from tourism. A very limited portion of value added from tourism is currently available to the poor, and, given the complex and many-layered value chain associated with many tourism products (e.g. international tourism in the South), it is not clear what proportion of value added could be claimed by the poor. Elliott and Mwangi (1997) estimated that less than 5% of wildlife tourism added value in Laikipia District, Kenya, accrues at the local level. Yet there is also a growing movement towards corporate social responsibility in international business management, which anticipates increased willingness by the private sector to invest in poverty reduction (e.g. Mintzberg et al 2002).

Even within the local level there is evidence of significant competition for the benefits that accrue. A key source of conflict in CBWM is the way in which a few powerful community members ensure that they and their families receive the majority of the benefits (be they in terms of income, jobs, rights or other benefits). For example, Homewood et al (2001) find that the benefits from wildlife tourism tend to be absorbed by elites within Maasai communities. In Section 4 we review 'pro poor tourism' approaches.

2.4.3 Bushmeat

Considerable research has been conducted into bushmeat harvesting, particularly in west and central Africa. However, given that the bushmeat trade is largely informal or illegal, there is little aggregate or official data available for its value in poor peoples' lives. Research conducted to date has tended to focus on conservation and science issues, such as establishing sustainable bushmeat off-take rates, rather than the role bushmeat plays in the livelihoods of poor people or the rate of substitution between bushmeat and other protein sources such as fish and beans. What evidence does exist is largely anecdotal.

From World Bank data we know that an estimated 350 million people living on the equivalent of less than a dollar a day live in or close to forests. Included in this figure are an estimated 60 million indigenous people who live in rainforests in Latin America, South East Asia and West Africa, and who are heavily dependent on forest resources (Hudson, pers.com.). Forest resources are known to be of particular importance to women and more vulnerable groups, who depend on them for a wide variety of products including fuel wood, medicines, wild products (bushmeat, fodder, edible leaves, honey, roots, fruit) and especially as buffer resources from communal areas during seasonal scarcity.

Outside forest areas, bushmeat is also an important livelihood asset for the poor. Recent research such as that by TRAFFIC (2000) and Campbell et al (2001) in eastern and southern Africa suggests that bushmeat consumption per capita can be as high in savannah/rangeland areas as it is in forests. The TRAFFIC (2000) study of selected locations in seven eastern/southern African countries found similar per capita consumption figures as forest areas. For example, bush meat was found to be much cheaper than domestic meat in six of the seven countries surveyed, with bush meat being 75% cheaper than domestic meat in Zimbabwe. The TRAFFIC study also found that it is the poorer households that are more greatly reliant on bushmeat. More importantly, bushmeat is relied upon to an even greater extent during times of economic hardship, droughts and famine. It is also a vital source of income in many communities in the region. "In the western Serengeti of Tanzania, for example, more than a third of traders rely on bush meat as their sole source of income." (TRAFFIC, 2000).

Many estimates of the value of the bushmeat trade in individual countries or areas exist.

Wilkie and Carpenter (1999b) estimate that 25 million forest dwelling people in equatorial Africa eat over 1 million tonnes of bushmeat p.a. (see Table A8 in Annex 1). Taking typical estimates of per capita consumption (e.g. an average of about 20kg per capita p.a. as in many west and central Africa studies) and of value (about \$1,000 a ton), it is possible to guess that the 350 million poor people living in or near forests may consume as much as 7 million tons of bushmeat p.a., with a value of up to \$7 billion p.a. But these figures are hugely sensitive to actual per capita consumption of bushmeat, which itself varies greatly with availability, income, traditions, circumstances and tastes. For comparison, the value of annual trade in non-wood forest products globally is estimated at \$15 billion, and the value of trade in wild resources generally, including fish and forest products, is estimated at \$160 billion p.a. (Broad, cited in Roe et al 2002). In Section 5 we review efforts to tackle the unsustainable harvesting of bushmeat.

Bushmeat supplies are steadily declining in many countries, such as Ghana and Cameroon, due primarily to over-harvesting, in turn encouraged by the commercialization of the bushmeat trade, improved access via logging roads, and illegal hunting and trapping in logging areas (Bowen-Jones et al 2001).

The underlying causes of the bushmeat crisis are well documented. The DEFRA funded "Bushmeat – A Pilot Study – Output 1" (Bowen-Jones et al 2001) compiled and reviewed 490 bushmeat references, and concluded:

- Bushmeat suffers from **major policy and market failures**, in that its price fails to acknowledge the scarcity of the resource and the potential cost of its replacement.
- Unlike other common poor resources, bushmeat is **generally informally or illegally harvested** and exists in ecosystems where many other products are produced simultaneously and are being used by a wide array of stakeholders (e.g. timber extraction by large-scale logging companies). Little is known about the aggregate linkages between the bushmeat trade and poor peoples' livelihoods.
- **Existing policy and legislative frameworks of the rangeland states are very uncondusive to sustainable management** of natural resources, bushmeat included.
- **Loss of habitat** is often the result of extensive poverty, corruption, poor law enforcement and weak governance. One stark example of the role that poverty might play is given by the decline in purchasing power of a Ugandan Forest Officer's salary over the past 30 years.

Poor people are adapting to the decline in bushmeat, but at a cost. DFID-funded research in Ghana indicates that poor people have adapted to a steady decline in bushmeat supply, but that this has important implications in terms of reduced livelihood diversity and increased vulnerability, especially as bushmeat decline is often associated with a decline in poor people's access to forest resources generally, and is thus an indicator of additional stresses. In Ghana, as in the Cameroon, bushmeat supplies are already heavily depleted. In north eastern Ghana, for example, relatively few people were found to be dependent on bushmeat for their livelihood. Loss to livelihoods has been a gradual process, and poor people have adapted to this loss, including substituting fish and bean protein for that previously obtained from bushmeat. A few hunters have even been heard to say that as animals have become scarcer, prices and returns have improved. However it is clear that this loss has meant reduced incomes for many poor people, and that the loss of bushmeat has been associated with a decline in the availability of forest resources more broadly (Mackenzie, pers.com.). In Section 5 we explore the scope for sustainable bushmeat management.

2.4.4 Conservation

Developing country governments continue to invest considerable resources in setting up and maintaining protected area systems in line with national conservation policies. These systems are generally not self-

financing, and many are heavily subsidized by central government, often with donor assistance. The aggregate impact of these systems and their financing on the poor is not known, though research suggests that the net distribution of direct and indirect costs and benefits is highly skewed, with the poor receiving a very small share of benefits, and yet 'paying' the lion's share of the opportunity costs of the land set aside (e.g. Emerton 1997).

Conservation commands considerable north-south financial flows. For example, the World Bank and the Global Environmental Facility alone have invested an estimated \$7.4 billion in conservation and biodiversity projects over the past 10 years. UNDP and UNEP have also made considerable investments. Smaller sums have been invested by conservation organisations such as WWF and Conservation International. These organisations vary in the extent to which poverty issues are considered and monitored in their work. In Section 6 we review the extent to which conservation efforts take account of poverty, particularly with regard to financing the 'existence' and 'option' (international public good) values of wildlife.

2.5 Conclusions

We have explored the evidence for wildlife-poverty linkages by reviewing published and grey literature and through a series of case studies. In addition to reviewing the significance and dynamics of key aggregate relationships (particularly tourism, bushmeat, and conservation) we have use the Sustainable Livelihoods Framework to ensure we consider the broad linkages between wildlife and the breadth of livelihood outcomes desired by poor people. The case studies, the aggregate and anecdotal evidence available, and the experience of those interviewed suggest that many millions of poor people, particularly those living in agriculturally marginal or forest areas, are dependent to some extent on wildlife resources.

In addition, many poor people are excluded from being able to use wildlife through declining wildlife populations and lack of access. They have had to adjust their livelihood strategies accordingly, usually at some cost to in terms of reduced income, less livelihood diversification and increased vulnerability. The risks to the poor of further declines in wildlife populations are not well understood.

Wildlife habitat protection can safeguard key environmental services such as water and soil quality. However, human-wildlife conflict is also significant, with crop raiding and hunting of livestock taking a large toll on the livelihoods of many poor people. Wildlife conservation through protected area systems continues to be resisted by poor people who are denied access and use rights in such areas.

We identify four development themes that respond to these linkages.:

- Community based wildlife management
- Promoting pro poor wildlife tourism
- Sustainable bushmeat management
- Pro poor conservation.

Table A9 in Annex 1 identifies examples from the range of efforts to use these themes for poverty reduction. In Sections 3-6 we explore lessons learned from these efforts, the policy and institutional implications, and the implications for future development interventions for each of these four themes.

3 Community-Based Wildlife Management

3.1 Introduction

In Section 3 we review community based wildlife management, assessing the extent to which this approach has been used as a mechanism for poverty reduction, lessons learned, policy and institutional implications, and conclusions as to the potential impact on poverty. We draw on many examples and reviews of CBWM work around the world, including the Namibia and Tanzania case studies conducted for this Study.

3.2 CBNRM and CBWM

Community based natural resource management (CBNRM) is a resource management model that assigns all or a proportion of ownership, rights and control over natural resources to a designated group of local people or a designed local institution. This is what distinguishes CBNRM from the other management models such as state-managed (e.g. protected areas), private-management or some form of co-management.

Box 7: CBWM trends in Southern Africa

In the 1980s, with support from DFID and other donors, the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) program in Zimbabwe, and the Luangwa Integrated Rural Development Project (LIRDIP) and Administrative Management Design (ADMAD) for Game Management Areas, both in Zambia, became globally renowned for demonstrating that local communities will deliver on conservation goals that are perceived to match their own development objectives. Championed by conservation groups, these new initiatives were generally supported by development agencies as a major step forward from efforts to exclude or 'buy-off' perceived 'threats' to conservation towards empowering poor people to manage their own resources for their own benefit.

Through the 1990s questions were raised as to the cost-effectiveness of donor and government interventions to support CAMPFIRE and similar programmes, with particular concern expressed about the impact of poor revenue sharing mechanisms (e.g. benefit retention at district, rather than village or individual, level) on programme objectives, as well as high transaction costs and apparent limited replicability of CBWM. Some conservation organisations also express concern as to the real conservation impact of CBWM to date, and appear to be moving back to approaches that favour exclusion of poor people from areas of high conservation value.

DFID, among other donors, is now reviewing the role that CBWM, and community based resource management more generally, is playing the region. New initiatives such as the DFID COMMARK program to promote market access for key southern African productive sectors including tourism, offer added incentives for enabling marginal and remote communities to participate as a means of improving livelihoods. The use of Challenge Funds, such as DFID's Business Linkages Challenge Fund and COMMARK helps leverage private sector investment in poverty reduction.

In southern Africa CBNRM has come to be used synonymously with CBWM, which can cause confusion. Community based wildlife management (CBWM) is one form of CBNRM. CBNRM roots in south and south east Asia point to a much broader, and development- rather than conservation-led, history where communities have taken responsibility for managing their own common forest (wood and non-wood), fish and water resources, as well as other communally held assets such as grazing land, and where laws and regulations are in place to maintain these rights. CBWM as an approach to both development and conservation has been tried in most wildlife-rich countries, but has only tended to win significant financial backing in those areas where wildlife is perceived to have significant economic value, e.g. for tourism. Since the 1980s, southern Africa has been experimenting with conservation-led CBWM, generally without integrating wildlife management into the management of other natural resources.

3.3 CBWM and Poverty Reduction

CBWM is enhancing the livelihoods of poor people in remote and marginal areas, particularly through the empowerment, improved governance, and increased income impacts of community tourism and forest management initiatives. The evidence for this is drawn from the six case studies (see Table A5 in Annex 1), and a review of other experiences with CBWM (see Table A8 in Annex 1 for examples). What is apparent is that the development of systematic national programmes for CBWM is largely restricted to Africa. Outside Africa CBWM tends to be characterized by small-scale local species-specific initiatives, often led by conservation NGOs. The benefits delivered by CBWM initiatives vary greatly between them.

Box 8: Benefits and Costs of Community Based Wildlife Management

Possible Benefits to Poor People	Possible Costs to Poor People
<ul style="list-style-type: none"> ▪ Empowerment, rights and a sense of control over local resources ▪ Enterprise and employment opportunities ▪ Spin off and related business opportunities ▪ Financial benefits from sale or lease of ownership/use rights, sale of products, revenue sharing ▪ Access to support for capacity building and training ▪ Increased security and risk spreading over seasonal and drought cycles ▪ Catalyst for development inputs such as extension and infrastructure investment especially roads, electricity, communications ▪ Governance and empowerment benefits, with improved participation in decision making ▪ Cultural ties, values respected 	<ul style="list-style-type: none"> ▪ Risk of unmet expectations, diversion of productive time, if CBWM fails to deliver short term benefits ▪ Opportunity cost of land and rights foregone in areas with restricted use ▪ Crop and livestock damage, and even threat to human life, associated with healthy wildlife populations ▪ Restrictions on resource utilisation associated with sustainable off-take ▪ Increased competition and conflict between participants and non-participants

In Namibia the Kunene case study shows that Conservancies established by communities with the full support of the law are empowering local people, enabling improved governance, and creating opportunities to earn significant amounts from tourism and hunting businesses, both community-owned and in partnership with the private sector. In Tanzania, the Mbomipa case study demonstrates how the pilot WMA has greatly increased communal village income, has reduced human-wildlife conflict, has helped establish an accountable inter-village resource management institution and, in some villages, a definite sense of empowerment. The case studies in Namibia and Tanzania illustrate some of the **challenges** facing CBWM as a mechanism for poverty reduction:

- First, **significant donor, government and NGO resources have been invested** – e.g. USAID, DFID and other bilateral donors have invested an estimated £10 million in establishing Conservancies, supporting related tourism and hunting businesses, and strengthening NACOBTA (the Namibian association of community-based tourism ventures). Some argue that these are therefore high transaction cost projects. However, they do aim to deliver a fairly diverse bundle of livelihood benefits to large numbers of remote poor people in sparsely populated areas. The sums of money invested to date must raise questions of sustainability and replicability. In Namibia, for

example, some Conservancies are cutting back on staff realising that donor funds, particularly the USAID-LIFE project, will soon finish. There are believed to be a further forty or so Conservancies in the pipeline, and these will be expected to set themselves up with significantly less donor funding than has been available for the trail-blazers.

- **Second, CBWM has not yet succeeded in fostering broader rural development, except through improved local governance.** The DFID bilateral WILD project in Namibia and the Kunene and Mbomipa case studies have as their premise leveraging local economic growth through improved governance, strong community resource management institutions and an injection of 'entrepreneurial energy'. These projects aim to cover a wide range of natural resources, not just wildlife. A major focus is long-term improvement in empowerment and democratisation (Long 2001). Leaders of these projects argue that CBWM offers a model for inter-sectoral collaboration, has delivered improvements in incomes and management practices, and has the full support of government. While these initiatives aim to empower communities to move from CBWM to community based management of other resources, this does not seem to have happened to a significant degree as yet. The community institutions being set up for Conservancy and WMA management are new institutions and so far have been concerned with wildlife management only.
- **Third, the role played by conservation organisations in CBWM needs clarifying.** CBWM programmes in both countries have at different times tried to pursue both wildlife conservation and poverty reduction goals – in Namibia some of the main sponsors and players are primarily concerned with conservation (e.g. USAID-LIFE, WWF-US, WWF-UK and IRDNC) and in Tanzania the two main WMA pilot projects grew out of conservation projects (for Ruaha National Park and the Selous Conservation Area). The teams leading and advising these projects within government, donors and NGOs are generally scientists, social development, governance or institutional strengthening experts, with limited experience of enterprise development. As highlighted in Section 2, the livelihood impacts of CBWM also appear to be generally poor monitored, an issue now being addressed directly in the WILD project.

During the 1990s, a number of parallel initiatives have been assessing the connections between wildlife enterprise, local benefits and conservation in different parts of the world and from different angles. For example, the ESRC-funded Community Conservation Research Project (a collaboration between the University of Manchester, AWF, CASS in Zimbabwe and University of Cambridge, see Hulme and Murphree 2001), and the International Institute for Environment and Development's Evaluating Eden Project have separately assessed community-based conservation initiatives at both policy and local levels, the former in Africa and the latter in Latin America, Africa and Asia. At the same time, the Biodiversity Conservation Network (BCN – a collaborative initiative involving WWF-US, the Nature Conservancy and the World Resources Institute, with funding from USAID) recently completed a seven-year Biodiversity Support Program (BSP) supporting community wildlife enterprises in seven countries in Asia and the Pacific.

The experience of a wide variety of CBWM initiatives identifies the following as general problems encountered in CBWM implementation:

- **Policy weaknesses and regulatory barriers to entry.** A critical condition for successful CBWM is that communities have a legal right to ownership/use of wildlife resources; without this, they have no asset with which to negotiate a joint venture or set up a tourism business. Furthermore, even in countries where appropriate policies are in place, the process for being approved e.g. as a Conservancy in Namibia, or a WMA in Tanzania, are thought to be complex, costly and time-consuming, and act effectively as a barrier to entry.
- **Time and other transaction costs tend to be high, especially for the most remote communities.** It can take up to 3 years support for a community to develop an accountable, competent institution capable of common property management and equitable benefit distribution.

The typical ratio of 'process' transaction costs to actual investment costs in a community tourism conservancy and related enterprise in Namibia is estimated at 10:1 (Roe, pers.comm.).

- **Poor business and contingency planning.** CBWM enterprises, especially wholly owned, small, community businesses such as a campsite, are often established with very limited assessment of market potential, risks and the product required. Weaknesses in product design, marketing, and business management skills make it difficult to turn 'community' owned enterprises into real commercial success stories.
- **Weak governance and benefit sharing processes** in community institutions for allocating communal and individual benefits, leading to significant inter-stakeholder conflict. One issue here is that of the difficulty of fostering and rewarding entrepreneurship through communal ownership of a business and benefit stream.
- **Few private sector players willing and able to form fair and lasting partnerships** with poor communities. Wilderness Safaris and Serena Hotels are good examples of hotel/lodge operators who work constructively with local communities to promote local livelihoods and ensure sustainable resource use, and yet neither of these groups makes much of this approach in their marketing literature – in other words, partnership with local stakeholders makes good business sense and is not primarily for PR purposes.
- **Few capable intermediaries**, trusted by both sides, able to broker private sector –community partnerships
- Success factors lie outside the control of the poor. The ability of the poor to find employment and enterprise opportunities within CBWM depends largely on factors outside their control such as access to markets, infrastructure and national security.

3.4 Policy and Institutional Issues

A review of existing CBWM programmes indicates that the policy and institutional environment can enable access for the poor to the livelihood benefits of CBWM in the following ways:

- **Establish poor peoples' rights and resource tenure.** Poor people want to have rights over forest and wildlife resources, in part to guarantee their own access to the resources in the face of competing, and often corrupt, interests and in part to have assets to bring to the negotiating table. These rights may take the form of land ownership, land rights or resource use rights depending on the prevailing national legal framework. Not only must the legal rights be in place but they must be enforced, with conflict resolution mechanisms to support them. The policy, regulatory and legislative obstacles to establishing successful CBWM are still huge in most countries. Even in Tanzania, for example, where much of the outside world believes a CBWM process has been being successfully implemented for more than five years, the reality is that the Wildlife Management Area policy has still not been turned into a set of workable regulations, and instead, there appears, once again, to be growing conflict between existing stakeholders in lucrative hunting contracts and proponents of CBWM.
- **Remove barriers to entry.** Many of the processes that poor people have to go through in order to derive benefits are bureaucratic, complex and costly, with Conservancy (Namibia) and WMA (Tanzania) registration as good examples. Poor communities are often expected to prepare lengthy and detailed financing plans, management plans, land use plans, and business plans with 5-year or more budgets and forecasts. Private sector investors also still face much unnecessary red tape opening businesses and forming joint ventures with local communities. Simplifying and streamlining these procedures would do much to help reduce barriers to entry.

- **Encourage fair and lasting private sector partnerships.** A small but growing number of tour operators actively choose to work with local communities. For some, such as Wilderness Safaris, this is central to their business operations. For others this is a way of accessing key resources (e.g. traversing rights) or minimising possible conflict. Private sector forest concession owners, on the other hand, appear to have more limited incentives for working with poor people, even in terms of offering employment. Policies should create incentives for partnerships and support the development of the skills and resources to establish and maintain them.
- **Strengthen community institutions, building on existing strengths and motivation.** The poor are ready entrepreneurs. To turn wildlife into a livelihood opportunity requires not only that they have a right to exploit, harvest and trade their assets, but also that they have the capacity to do so. NGOs have provided the backbone of preparing CBWM communities for their business opportunities, though some have been more effective than others. Enabling community access to sound resource management and enterprise development skills is key.
- **Encourage equitable benefit sharing mechanisms.** There are many cases where the income from CBWM is held in a community bank account, unspent, awaiting institution building or arbitration among stakeholders. The income that has been spent has tended to be spent on clinics, village infrastructure, village tax reduction, educational bursaries and so on. Very little income from CBWM has yet made it down to household level.
- **Enable community entrepreneurs.** There is a tendency for CBWM to value communal participation and communal benefits for the poor more highly than individual participation and benefits. This may in part reflect sound principles of CPR management and local preferences. But in some cases this is an expressed preference of donors and NGOs rather than communities. When enterprise development is added to CBWM to enable benefit flow, creating opportunities for individual entrepreneurs within the community can be a much more effective mechanism for enterprise success than, for example, a community held 'equity' stake.
- **Upgrade the community tourism product and promote community based wildlife tourism internationally.** Recently we've seen the emergence of several community wildlife tourism marketing umbrellas – e.g. in Kenya ('The Kenyan Portfolio', private sector), and Namibia (NACOBTA, NGO). Community based tourism (like 'ecotourism') still suffers an image problem.

3.5 Conclusions

Evidence suggests that community-based and co-management approaches to wildlife management can successfully help reduce poverty and improve livelihoods. CBWM experience to date may have been constrained by the duality of conservation and development goals for many initiatives. Where CBWM is led by conservation organisations it appears to have had difficulty demonstrating livelihood impact, particularly when resulting financial benefits are compared with the transaction costs of setting up and operating CBWM projects. However, the demonstrated benefits of CBWM also include significant empowerment and governance impacts and improved well-being (the sense of being in control of wildlife resources is widely valued by communities, irrespective of benefit flows), which cannot be quantified. Within DFID the two remaining bilateral community wildlife management projects (WILD and Mbomipa) are justified as much in terms of deepening governance and instituting political and social reform, as in terms of financial livelihood impacts.

The extent to which CBWM can help trigger broader rural economic development is not clear. To date improvements in governance, empowerment and enterprise opportunities have not generated significant multiplier effects. In some areas, notably Namibia's Conservancies, there are limited other communal resources to bring under a CBWM umbrella, though the fit with livestock rearing and

marketing has not been explored. In Tanzania CBWM effort to date has focused on piloting WMAs and fostering partnerships for community tourism ventures, and not on linking wildlife tourism into the broader rural economy. A study of the actual and potential development impact of WMAs in Tanzania is to be commissioned within the Mbomipa project, which will offer insights into this issue.

The ‘transaction costs’ for any form of community-based resource management are likely to be fairly high, as are the costs of reaching the remote poor, especially those in sparsely populated areas. Yet reaching these people is essential to delivering on the MDG ‘Eradicating extreme poverty and hunger’. Evidence suggests that cost effectiveness can be increased, both by careful cost management (e.g. keeping the costs of foreign technical assistance to a minimum), taking a long-term perspective, leveraging ‘multiplier’ impacts from well-targeted assistance (e.g. DFID support for the NACOBTA community-enterprise marketing initiative in Namibia), and enabling and encouraging civil society organisations, including international NGOs, to take on more of the costs (e.g. facilitation).

Some argue that CBWM has not yet been given a real chance to show its potential impact on poverty – that it needs to be applied with flexibility and careful investment, and with a longer timeframe to prove itself, or in the words of Marshall Murphree “[CBWM] has to date not been tried and found wanting; it has been found difficult and rarely tried”.

We conclude that **CBWM is likely to have a positive impact on poor peoples’ livelihoods** when:

- Wildlife is an economically attractive land use, e.g. in wildlife-rich agriculturally marginal areas.
- There are commercially viable enterprise opportunities, with access to markets, infrastructure, skilled labour and training, and other necessary enterprise inputs, which can deliver tangible short-term, as well as sustainable long-term, benefits.
- There is a supportive legislative and policy environment.
- Livelihood improvement is the primary overarching goal, and is tracked and monitored.
- There is a viable wildlife population; and established and legally binding community land use rights over wildlife resources.
- There are coherent, stable and relatively small local communities with established natural resource management institutions, established benefit sharing mechanisms and experience of managing community businesses (e.g. livestock trading).
- There is an established relationship between the community, local private landowners and potential private sector partners.

4 Pro poor Wildlife Tourism

4.1 Introduction

In Section 4 we review evidence for the existence of practical mechanisms to reduce poverty through tourism development, particularly with regard to wildlife tourism, and draw out the policy and institutional implications.

4.2 Pro poor Tourism Approaches

Box 9

Pro-Poor Tourism (PPT) is tourism that results in increased net benefits for poor people. PPT is not a specific product or niche sector but an approach to tourism development and management. It enhances the linkages between tourism businesses and poor people, so that tourism's contribution to poverty reduction is increased and poor people are able to participate more effectively in product development. Links with many different types of 'the poor' need to be considered: staff, neighbouring communities, land-holders, producers of food, fuel and other suppliers, operators of micro tourism businesses, craft-makers, other users of tourism infrastructure (roads) and resources (water) etc. There are many types of pro poor tourism strategies, ranging from increasing local employment to building mechanisms for consultation. Any type of company can be involved in pro-poor tourism - a small lodge, an urban hotel, a tour operator, an infrastructure developer. The critical factor is not the type of company or the type of tourism, but that an increase in the net benefits that go to poor people can be demonstrated.

propoortourism.org.uk

In recent years a growing body of research has assessed pro poor tourism (PPT) as a practical approach to increasing development and poverty reduction opportunities through tourism (e.g. Goodwin et al 1998, Ashley et al 2001). PPT approaches tested to date include:

- Enabling **poor people to set up their own small scale tourism and tourism-linked businesses**, including joint ventures with the private sector. Support for the development of community-based wildlife tourism enterprises, as discussed in Section 3, is one of the better known and reviewed PPT approaches, though comprises only a small part of the spectrum of PPT approaches. The issues and challenges facing community participation in tourism, particularly wildlife tourism, has been the subject of several reviews (e.g. Ashley and Roe 1998).
- Creating the **incentives, awareness, capacity and processes needed for the private sector to voluntarily improve** livelihood opportunities for poor people in tourism, including increasing cash and non-cash benefits, job creation and training. There is a steadily growing movement towards improved corporate social responsibility across a number of sectors, with the Sustainable Tourism Initiative in the UK as an example of a voluntary code of practice.

Box 10

The UK **Sustainable Tourism Initiative** is a partnership of over forty organisations concerned with outbound tourism from the UK. It embraces large and small tourist companies, industry associations, NGOs, academic institutions and government. These organisations are working together to create sustainable tourism practices. These are practices which, as well as giving enjoyable experiences to the visitor, will also improve quality of life of the local people and protect their environment. The Foreign and Commonwealth Office is providing £150,000 to support the Initiative. STI aims to:-

- Develop imaginative communication programmes for tourists for each stage of their holiday experience, encouraging them to preserve the local environment and visit local communities - and in turn providing a boost to local economies;
- Encourage tourism businesses to buy food and other supplies locally rather than importing them and employ local people wherever possible, so as to contribute to more secure livelihoods;
- Work with the tourism industry to preserve the environment for the benefit of both the local community and the visitors.

- Adjustments to **policies, regulations and guidelines** requiring local sourcing of labour and other inputs to tourism (increasingly a negotiating point between community and private sector joint venture partners). 'Planning gain' can be used to encourage pro poor private sector tourism when granting rights to state assets (e.g. wildlife) or concessions on state land. Possible policy adjustments include guiding the spatial location of new tourism development, the marketing and branding of tourism products, influencing resource tenure and adjusting the regulatory framework for investment in tourism.
- Fostering **stronger linkages between the informal and formal sectors** through consultative forums and shared product design. A recently completed project in the Gambia (funded by DFID's Tourism Challenge Fund), offers insights into ways of ensuring the effective integration of the informal tourism sector (e.g. craft vendors, fruit and vegetable sellers) into the formal sector, through dialogue, licensing, giving badges and sharing of product quality information (for craft products), and through improve product quality, labelling (to health and safety standards) and marketing for food and drink products.

Box 11: Three main types of PPT Strategies

Increase economic benefits	Enhance non-financial livelihood impacts	Enhance participation and partnership
<i>More specifically:</i>		
<ul style="list-style-type: none"> • Boost local employment, wages • Boost local enterprise opportunities • Create collective income sources – fees, revenue shares 	<ul style="list-style-type: none"> • Capacity building, training • Mitigate environmental impacts • Address competing use of natural resources • Improve social, cultural impacts • Increase local access to infrastructure and services 	<ul style="list-style-type: none"> • Create more supportive policy/planning framework • Increase participation of the poor in decision-making • Build pro-poor partnerships with private sector • Increase flows of information, communication

Source: PPT Partnership, November 2002

DFID has funded a number of PPT initiatives. DFID published '*Changing the Nature of Tourism: Developing an Agenda for Action*' in 1998 and has funded the work of a Pro Poor Tourism partnership led by Caroline Ashley (ODI), Harold Goodwin (International Centre for Responsible Tourism) and Dilys Roe (IIED).

In 2000 DFID established the **Tourism Challenge Fund (TCF)**, now integrated into the Business Linkages Challenge Fund, which to date has agreed to fund 12 PPT initiatives with a total commitment of £2.4 million. These projects are identified in Table A10 in Annex 1. The TCF-funded projects are very different, and are at too early a stage to offer many lessons as yet.

4.3 Impact of Pro Poor Tourism

Explicit and coordinated support for PPT approaches is still fairly new, though considerable government and donor funds have been invested in supporting the development of tourism industries in the South, with mixed success.

Several studies have assessed PPT initiatives and their impact to date. Goodwin et al (1998) review experiences in India, Indonesia and Zimbabwe, and conclude that active management of tourism development is needed for poverty reduction potential to be realised. Ashley and Wolmer (2002) review the experience of South African National Parks commercialization process for land claims in and around Kruger National Park, finding that commercialization is most likely to yield pro-poor benefits when the political situation is supportive, the underlying asset is competitive, supportive policy measures are maintained throughout implementation and conditionally in the concessioning process clearly focuses on benefiting the poor. Ashley et al (2001) base their findings on analysis of six in-depth case studies: a large commercial operator in southern Africa, a small commercial operator in Ecuador, trade associations in Uganda and Namibia, an international NGO in Nepal, a Tourism Ministry initiative in South Africa and two cross-departmental government initiatives in South Africa, and conclude that a picture emerges of:

- **A complex supply chain**, with many intermediaries, which leaves the bulk of risk, value added and control over the product in the hands of layers of private sector operators and marketing companies. Tourism is high risk and yet investment in tourism often has long payback periods, leading to a high rate of business failure.
- Small but **very significant impact on poor people's collective and individual earnings** from PPT initiatives. Only a minority gains regular waged employment as a result of PPT, but for these people earnings are generally sufficient to lift their household from 'poor' to 'fairly secure'.
- A wide range of **non-financial livelihood impacts that decrease vulnerability** including development of skills, improved access to information, infrastructure, credit and markets, and strengthening of community organisations. Less tangible change such as renewed pride, optimism and participation in decision-making is also highly valued.
- Fairly **wide, though unequal spread of benefits** among poor people. Economic opportunities tend to be concentrated among the semi-skilled, rather than the poorest. Benefits are widely dispersed through the community through wage earners supporting others, spending of collective income on community projects, and buying of local products.
 - A wide range of strategies that can be adopted to promote PPT, from those influencing local stakeholders (e.g. communities, the private sector) to national stakeholders (e.g. governments).

Rogerson (2001) identifies **ten principles for successful tourism-led local economic development** from his review of South African experience: realism by policy-makers as to tourism potential; investment in a healthy, well-trained and education workforce; tangible benefits for poor communities; recognition of linkages to other sectors; incentives for tourists to venture outside 'oases'; focus on smaller-scale

products; support for local networking to develop circuits and reduce leakages; maximum community participation; good governance; and objective performance monitoring.

4.4 Applying PPT to Wildlife Tourism

PPT can be applied to all types of tourism, not just wildlife tourism, but wildlife tourism has specific characteristics that indicate a good 'fit' with PPT approaches:

- **Many poor people live in wildlife rich areas**, which are generally agriculturally marginal and/or remote from markets. Wildlife tourism can therefore offer enterprise and employment opportunities in **poor, remote areas, with few livelihood diversification opportunities**, and where people are hard and expensive to reach through traditional development activities. The positive livelihood impacts of the new Namibian community wildlife Conservancies are a good example of this. A recent study by Ashley et al (2002), of tourism and local development in the northern Selous area of Tanzania, finds many constraints to the ability of remote households to diversify into new wildlife-based options and yet considerable potential (Box 12).

Box 12: Northern Selous: Constraints to and Potential for Wildlife-Based Livelihoods

Constraints	Potential
<ul style="list-style-type: none"> • Regulations still not in place to permit local wildlife based businesses • All time available has been invested in compliance with WMA policies, not enterprise • Wildlife is being used for communal income, not local economic development or household-level opportunities • Jukumu Society, which will have right to manage WMA wildlife, is remote from village governments • Trophy hunting has few upstream and downstream linkages, and large barriers to entry as an opportunity for local communities • Selous is a fly-in luxury destination – few opportunities for providing spin-off services; no kiosks, craft centers or cultural shows yet • Highest potential for tourism is inside the protected area, not on community land • Far removed from markets for other wildlife linked products such as skins, meat • Socialist legacy and suspicion of individual entrepreneurialism 	<ul style="list-style-type: none"> • Tanzania has massive potential for wildlife tourism, which is likely to be a major source of future comparative advantage • Experience in other countries suggests huge growth potential for Tanzania's wildlife based and community wildlife businesses • Tourism is small but growing fast in the southern circuit that includes the Selous • Integrated wildlife and livestock management is the most economic land use for large areas • Wildlife asset is good quality, suitable for a range of wildlife-based productive industry • Much has not been tried yet – it is still early days for Tanzania's wildlife utilisation strategy

- In many countries **wildlife is owned by the state**, as is much of the wildlife-rich land. Governments can use the process of granting rights of use and access to these assets to influence the pattern of private sector tourism development and its impact on poverty.
- A small but **growing number of private sector wildlife tourism players see partnership with the local community as key to success** and/or as part of the product itself (e.g. cultural tourism). Wilderness Safaris in southern Africa and the Serena Hotels Group in eastern Africa are good examples of businesses that are mainstreaming community participation into their operations.
- **Seasonal employment** is available, e.g. in support of hunting tourism, that fits with other livelihood opportunities. Seasonality can sometimes be a disadvantage though, for example where year-round opportunities would be preferred.
- **Local poverty reduction is key to maintaining the wildlife product**. Increasing rural poverty is associated with rapid decline of wildlife numbers. Yet wildlife tourism is potential source of significant

future competitive advantage for many areas in which poor people live. PPT approaches offer a means of maximising the linkages between growth and poverty through encouraging sustainable wildlife tourism.

- There appears to be **geographic overlap** in remote but accessible areas with high wildlife incidence, between the potential for wildlife tourism and poverty, noting that an estimated 70% of the MDG targeted poor live in rural areas.

Three of the DFID-TCF projects are supporting the development of pro poor wildlife tourism (see Annex 1 Table A10). These are the NACOBTA efforts to improve the marketing of community tourism ventures in Namibia, the African Wildlife Foundation project to help set up community-private sector tourism businesses in Tanzania, South Africa and Mozambique, and the Mboza/ODI investment in pro poor tourism more broadly in southern Africa, where two of the six partners are in wildlife tourism. Box 12 indicates the issues they address and their main activities. All three will offer vital and different lessons on the scope for generating real livelihood impacts from wildlife tourism, which DFID will be able to capture and feed back into the design of future initiatives.

Box 13: Pro poor wildlife tourism: issues and activities in 3 DFID-TCF projects

	NACOBTA	African Wildlife Foundation	Mboza/ODI
Issues addressed by project	<ul style="list-style-type: none"> • Ensure that information on community based tourism enterprises (CBTEs) available and accessible • Enable easier booking of CBTEs by tour operators and the general public 	<ul style="list-style-type: none"> • Support setting up of Pro poor wildlife tourism joint ventures between private sector and local communities • Need to build NGO, community and private sector capacity for partnering • Need to test approaches and share lessons learned 	<ul style="list-style-type: none"> • Need to work on-site with commercial operators to develop PPT action plans • Need for a regional network to increase understanding of PPT • Need to facilitate private sector change with government support
Main project activities	<ul style="list-style-type: none"> • 6 of 25 CBTEs to go on booking system, with self-funding mechanism set up to ensure more can be added • Grants to CBTEs for product upgrade 	<ul style="list-style-type: none"> • Establish at least 6 innovative joint ventures/partnerships yielding livelihood impacts for 50,000 poor people 	<ul style="list-style-type: none"> • Work in six partnership pilot sites across the region • Share information on PPT through trade body networks • Regional PPT workshop at end of project to disseminate findings and discuss implications

4.5 Policy and Institutional Issues

Conditions for successfully encouraging community based wildlife tourism businesses, including joint ventures, have been reviewed in Section 3.4. The key policy and institutional conditions for PPT more broadly are:

- **Create an attractive economic climate for tourism and encourage investment in tourism while minimising leakages**, through the regulatory and fiscal systems. Benavides recommends that domestic policies in developing countries against leakages from international tourism should include (i) the provision of tax incentives to reinvest profits and potential cash transfers that otherwise would be invested abroad; (ii) building the capacity of tourist destinations to produce goods and services required by the tourism sector; (iii) the provision of incentives to domestic investors to expand their participation in tourism and (iv) the enforcement of domestic competition policy against anti-competitive practices by tour operators.
- **Ensure that national and local regulations, standards and policies encourage pro poor entrepreneurs**. PPT implies adjustments to the type of product and location prioritized; adjustments to marketing strategies, regulations and grading categories; maximising local business opportunities; increasing market access for small and medium sized businesses; and support for mixed-membership trade bodies and associations.
- **Provide, or encourage the private sector to provide, training in tourism skills for poor people**. The experience of community-based tourism is that locals can readily fill the unskilled job vacancies for full-time and part-time cleaners, security guards and gardeners, and sometimes guides and drivers. However, opportunities for unskilled employees to be trained by operators for employment in more skilled tourism jobs such as cooks, bartenders, receptionists, administrators and managers, are still fairly limited.
- **Create incentives for the private sector to actively engage in activities to broaden and deepen local economic development** including employment of locals, support for informal sector and community businesses (e.g. transport, fruit and vegetable supply), and support for other community activities. South Africa experience demonstrates that applying 'planning gain' in the allocation of concessions in or near protected areas is a potentially powerful mechanism for PPT development (Ashley and Wolmer, 2002).
- **Encourage the growth of voluntary corporate social responsibility (CSR)** among national and local, as well as international businesses operating in country, through incentives and rewards e.g. publishing information about CSR performance, increasing shareholder access to CSR information.
- **Support policy coherence** between line ministries (e.g. tourism, planning and protected area management) and integration of tourism into development policy-making processes, notably PRSPs.

4.6 Conclusions

Tourism is a rapidly growing industry in many poor countries, and industry experts expect this to continue. Wildlife tourism represents an important source of future competitive advantage for some countries, including many in southern and eastern Africa. PPT is potentially a powerful force in delivering poverty reduction in these countries, both by helping to adjust the existing industry structure and by influencing the pattern of future tourism development. Yet much is not known, in particular there is a 'missing middle' of information and data about sub-national area-specific tourism development and its linkages to local economic development and poverty reduction.

Research to date highlights some of the strategies that can be adopted to promote PPT, as well as the priority and institutional issues to address. Ashley et al (2001) identify emerging lessons on PPT best practice, noting that PPT requires a diversity of actions, from micro to macro level, influencing product development, marketing, planning, policy and investment. They conclude that **'if opportunities for the poor could be opened up in all the places where tourism is significant in the South, it would affect millions of the poor'**.

Nevertheless, it is probably true that the small number of PPT initiatives has meant that PPT to date has provided only a minor dent in poverty, even when multiplier effects are taken into account. One country where the dent may be more significant is Namibia, where PPT in the form of community-based wildlife tourism has taken off in many parts of the country.

The challenges are huge. Tourism is still a relatively high-risk business for poor communities to engage in. Most tourism products have complex value chains, with intermediaries such as tour operators, an essential part of the business, though this therefore limits the potential profit margins at each stage of the value chain. Profits, power and direct access to potential clients still generally elude poor tourism entrepreneurs, though the growing number of cross-venture marketing and support organizations, such as NACOBTA in Namibia, demonstrates possible ways of improving their share in value added.

The success or failure of PPT lies with decisions made by the private sector, and the abilities of governments and donors to influence these. When the business case makes sense and the economic context is attractive, businesses are more likely to be willing to be pro poor. The risk of not actively pursuing PPT is that the benefits to the poor from tourism will continue to be minimal, and that hoped for 'trickle-down' does not materialise. An unregulated and unplanned tourism industry in a developing country is likely to have high leakages and low retention of income and profits in country, thus limiting its potential impact on local economic development.

5 Bushmeat and Poverty Reduction

5.1 Introduction

In Section 2 we assembled evidence for linkages between poverty and bushmeat. In Section 5 we review what is known about the scope for sustainable bushmeat management. We assess the extent to which bushmeat has been used as a mechanism for poverty reduction, the policy and institutional implications, and draw conclusions as to the potential impact of working through bushmeat to poverty reduction.

5.2 Efforts to Promote Sustainable Bushmeat Management

Efforts to halt and reverse the decline in bushmeat have tended to be driven by conservation rather than development agendas. As identified in Section 2.4.3, the extent of poor people's dependence on the bushmeat trade is not well understood.

To date efforts to tackle the trade have been concentrated in west and central Africa, reflecting the rate at which forest and bushmeat resources are being degraded and the priority attached to tackling these issues by those governments and donors. Initiatives have included efforts to promote cross-border collaboration, strengthen the policy and regulatory framework, improve enforcement, support community based forest management, work with timber companies, substitute for bushmeat as a food source, change hunter incentives, and explore domestication of bushmeat species. These are reviewed below.

The new **Congo Basin Forest Partnership**, launched at WSSD, will combine the efforts of six African governments, several donors, industry associations and many civil society organizations to improve forest governance and management in Cameroon, Central African Republic, Democratic Republic of Congo, Equatorial Guinea, Gabon and Republic of Congo – the same countries that are collaborating in the CITES Bushmeat Working Group (BWG – see Section 6.3).

Sustainable community based management of forest resources, including bushmeat, can work when the conditions necessary for sustainable management by poor people (see Section 3 on CBWM) are in place. These include supportive legislation and regulation, appropriate tenure arrangements, strong and cohesive community groups, an adequate wildlife resource and the ability to control access to the resource. The DFID-funded Mt Cameroon project, for example, had some success in supporting the development of the necessary institutions and incentives for community forest and bushmeat management, resulting in positive local impacts on food security and livelihoods. However, efforts to mobilise CBWM as a model for sustainable bushmeat management face significant constraints:

- **Different bushmeat management regimes are called for in different environments, with CBWM only suitable in some areas.** Bushmeat supplies come from a range of habitats; from primary forest, through different levels of logged forest, to farm-fallow areas. Different wildlife species are found in all of these habitats, with those best able to adapt to human environments often becoming major crop pests. Management of primary forests, often officially protected, challenges managers to balance the need to conserve wildlife species, particularly rare and endangered species, with the needs of poor, often indigenous, forest-dependant people. Bushmeat management within logged forests requires effective partnerships between government, timber companies, communities and civil society. Bushmeat management in farming areas, on the other hand, involves pest control as well as opportunistic harvesting and commercial hunting and trapping.

There is a lack of effective community based bushmeat management models to apply where there are obvious grounds for community involvement, as:

- **It is difficult to empower hunter, trader or consumer groups to manage resources because of the difficulty of excluding non-members.** Most bushmeat harvesting is illegal. Conflict within and between user groups as to benefit distribution are frequent, as they are for other CBWM initiatives.
- There are often **low human population densities in management areas hence relatively high transaction costs** of intervention.
- **There is little social cohesion in peri-urban settings**, where much of the bushmeat trade takes place, which constrains attempts to intervene along the supply chain.
- **Legislative weaknesses and ambiguities** are common, particularly with regard to land tenure and wildlife use rights
- The relevant **institutions at national and local levels are often weak** and/or corrupt.

Some efforts have been made to work with timber companies to ensure sustainability of bushmeat off-take. One conservation organisation, WCS, has had some success working in partnership with a German timber company in Congo to establish a bushmeat management programme limiting off-take to sustainable levels and help feed its local workforce. However, there do not as yet appear to have been any attempts by NGOs or timber companies to assess and incorporate the bushmeat consumption of local poor communities into their management planning.

Attempts to substitute farmed domestic species for bushmeat in forest areas have not met with success, tending instead to compete with other livelihood strategies. Poor fodder and grazing and constant disease problems, as well as the impact of poor veterinary services, have plagued efforts to farm domestic species in high rainfall areas. Any interventions that attempt to decrease consumer demand for bushmeat through seasonal bans or substitution for bushmeat demand may have a negative effect on the rural poor involved in bushmeat supply.

The farming of wild species outside forest areas, or 'game ranching', is an established and growing industry on private ranches in southern and eastern Africa. However, because of the capital, market access and enterprise management skills required, this is usually not an accessible livelihood strategy for the poor. The only legal sources of bushmeat for the poor in many savannah areas are from cropping quotas (e.g. Kenya), or the carcasses of wild animals hunted for their trophies (e.g. Zimbabwe, Tanzania).

Domestication of key bushmeat species has similarly met with economic, technical and livelihood obstacles, though farming the giant cane rat has had some success e.g. 600 farmers are keeping 18,000 animals in a GTZ project in Benin. More intensive management of ostriches, bustards, monitor lizards, parrots and some antelopes is either being considered or is already established. Civet cats and reptiles are already farmed to some extent for special products. In their review of bushmeat literature, Bowen-Jones et al (2001) conclude 'several authors advocate captive breeding of game species as a possible way to satisfy local demand without compromising the wild stock. This has obvious attractions where bushmeat fetches high prices and captive breeding should in theory reduce demand for wild-caught specimens. On the other hand, there is evidence that the major species with potential for domestication have long since been discovered, and there are doubts as to whether the targeted wild species have (or can be bred so as to develop) the behavioural and reproductive patterns conducive to domestication – the concept of raising wild animals in captivity is well intentioned but without adequate biological basis'.

Within the UK the issue of the bushmeat trade has recently received high-level political attention thanks largely to the **UK Parliamentary Bushmeat Campaign**, launched in March 2002 by a group of UK parliamentarians, conservation organisations and others. The Campaign aims to tackle the unsustainable bushmeat trade generally and believes that there are strong linkages between bushmeat and poverty. It is lobbying the UK government and engaging with other key players to increase efforts to tackle the trade.

5.3 CITES, Endangered Species and the Bushmeat Trade

A major area of concern about the bushmeat trade, and the reason underlying much of the largely US-sourced funding for debate and work on the 'Bushmeat Crisis', as it has become known, relates to the role the trade is believed to play in threatening rare and endangered forest species, particularly the great apes. However, tackling the bushmeat trade in order to ease this threat is complicated by the fact that endangered species make up a very small proportion of the number of animals caught (Bowen-Jones and Pendry 1999).

In the UK the impact of the bushmeat trade on great apes was highlighted by the Ape Alliance (a UK ape conservation umbrella group) in 1998. This led to the 2001 launch of UNEP's new Great Apes Survival Project (GrASP). The UK Government has publicly endorsed GrASP and, through DEFRA and FCO, has provided funding of £175,000, which is over 10% of the initial sum sought by UNEP. One of GrASP's aims is to find practical ways of getting the great ape species excluded from the bushmeat trade. The extent to which this will be possible is a subject of ongoing debate. Tighter regulations (and penalties), and hunter awareness building and species identification programmes are preferred options. However, given the informal or illegal nature of most bushmeat trade, tighter regulations tend to push the trade underground. Progress has been made with helping hunters to recognize the sounds and behavioural patterns of different species. However, whether this can help stop the accidental or deliberate hunting of endangered species is unclear.

The impact of the bushmeat trade on endangered species was raised by the UK Government (DEFRA) within CITES in April 2000 (Brown & Hunter, 2000). The UK Government (DEFRA) paper presented to the 11th CITES Conference of Parties (CoP11, Nairobi, 2000) concluded that the international component of the bushmeat trade is small but potentially important, and that the harvesting of Appendix 1 species for domestic use must be regulated at national level (Brown & Hunter, 2000; CITES CoP11 Doc 11.44). In its comments on the UK paper, the CITES Secretariat agreed that the issue is best addressed through collaborative effort of all the major organizations with a mandate involving natural resource management in forested regions. The UK's proposal that a new CITES bushmeat working group be established was adopted at CoP11 and the CITES Bushmeat Working Group (BWG), with representatives from six central and west African range states, was established. Since then both DEFRA and DFID have supported the BWG - DEFRA with funding for meetings and related consultancy work, and DFID through funding participation in meetings and workshops. To date the BWG has met three times and has commissioned important work looking at the harmonisation of wildlife policies and legislation in central and west African range states. Progress has been slow, however, and the forthcoming 12th CITES Conference (CoP12, Santiago, November 2002), will be asked to agree extending the Group's mandate to enable it to continue its work until at least CoP13 in three years time.

CITES bans any trade in endangered species, including all the great apes. However, using CITES as an instrument to tackle the bushmeat trade is constrained by the fact that only a small proportion of bushmeat is traded across national boundaries in central and west Africa, and very little bushmeat is traded outside Africa. CITES does not distinguish between inter- and intra-continental trade, so would be a very blunt and ineffective instrument for tackling bushmeat. Instead the CITES through the BWG aims to support capacity building and policy analysis. The issue of bushmeat is also receiving growing attention within the Convention on Biological Diversity. DEFRA will continue to support the BWG and aims to promote improved collaboration between CITES and CBD on this issue.

5.4 Policy and Institutional Issues

The following key policy and institutional issues need to be addressed if governments and donors are to be able to determine the need and means for tackling the bushmeat trade, and if poor people are to continue to benefit from bushmeat:

- **Improve understanding of the role of wild foods, including bushmeat, in food security, dietary quality and livelihoods.** At the national level mechanisms are needed to ensure that the value of bushmeat to nutrition, food security and incomes is captured for policy decision-making. PRSP processes and sectoral policies tend to ignore bushmeat as so little is known about its aggregate role in poverty reduction, with local level participatory poverty assessments failing to gather data on common pool resources, including bushmeat (Brocklesby and Hinshelwood 2001). Bushmeat research must proactively incorporate poverty and livelihood issues. The impact of declining bushmeat supplies on poor people should be monitored. The linkages between bushmeat and poverty should be researched and fed into policy processes by government. Bowen-Jones et al (2002) identify where bushmeat research is needed.
- There is a **spectrum of bushmeat livelihood activities** to be taken account of in designing appropriate policy regimes and management models, reflecting different habitat types: from farmers setting traps to protect their crops, to single or groups of hunters shooting different species by day and night, to trappers who may leave traps that catch more indiscriminately, often over long periods of time.
- **Continue to prioritise sustainable forest management, including tackling illegal logging, on development agendas.** The illegal timber trade and logging results in \$10-15 billion lost revenue to governments, more than the sums committed to health and education aid at Monterrey. It feeds regional and trans boundary conflicts, and erodes state mechanisms of formal governance. It also impacts on poor people. In some cases poorer groups are excluded from legal trade by the existing regulatory frameworks and the transaction costs associated with their centralised bureaucratic implementation. In other cases the process of illegal logging and trafficking “criminalises” communities, either by excluding them from the legal frameworks for forest management and enterprise, or by excluding them from access to a natural resource base to which they claim rights. In the process communities and families are subject to harassment and violence. Effective policy interventions offer the potential for win-win governance, poverty and environmental outcomes. For success broad based domestic constituencies for change that involve communities, civic associations, NGOs, the private corporate sector and governments, have to be engaged in policy discussion. Timber companies in particular should be required to manage all natural resources sustainably in their area, including bushmeat.

Box 14

“There is urgent need for an integrated approach to forest resource management that includes timber, non-timber forest products and wildlife. Domestication of bushmeat is not really an issue. People hunt because it’s a low investment, big return option. Increasing regulation and enforcement by government can simply push the trade underground. In Ghana, we are supporting a pilot initiative to engage primary stakeholders in the bushmeat trade in development of policy and regulation that will promote sustainability of their livelihoods.”

Cathy Mackenzie, Ghana Bushmeat Research Project

- **A supportive legal and regulatory environment for CBWM, and improved law enforcement.** Establishing tenure and use rights for poor people, and the rights to issue and control hunting licences by community organisations, is key to engaging them in bushmeat management. In Cameroon DFID has supported the implementation of community forestry laws that give local people the rights to manage their own forest and wildlife resources, including bushmeat, as part of our

programme to improve forest management. Cameroon has made significant progress in creating a supportive environment. Yet it is not without its critics. “Although many of the provisions of the 1995 Decree were new, they failed to provide a holistic legislative framework for local involvement in wildlife management. This partly reflects the fact that this younger generation of staff responsible for drafting the decree received little support and encouragement from external actors, particularly donors” (p3). Egbe (2001). DFID supports similar forestry programmes in Indonesia, Nepal, Guyana and other countries.

- **Involve the poor in developing ‘solutions’ to the bushmeat crisis.** Conservation organisations should target poverty reduction as central to their goals of sustainable wildlife management, and enable participation by poor people in decision-making about bushmeat management. They can also help create incentives for the private sector, including timber companies, to work with poor local hunters rather than exclude them. On the other hand, poor people need to focus their time and energy on activities that will enhance their livelihoods. They should not be asked to give priority to bushmeat or conservation related activities unless these are going to bring real livelihood improvements.

5.5 Conclusions

Bushmeat appears to be a key food and livelihood resource for many poor people in forest and rangeland areas, though the informal, and often illegal, nature of bushmeat harvesting and consumption makes the scale and strength of poverty linkages less than clear. Dependence on bushmeat is known to increase in times of stress, such as famine, drought and economic hardship.

There is a need for further targeted research. Bushmeat research has tended to approach the issues from a perspective of species conservation rather than the needs of poor people. Research tends to be better at estimating levels of destruction of wildlife - such as the often-published figure of between one and five million tonnes of bushmeat harvested each year from the Congo Basin, than assessing the role of the trade on the livelihoods of poor people. Little is known of the relative importance of bushmeat as a livelihood strategy as compared with crops and livestock, both of which are known to be vital to the majority of the rural poor. Better understanding of the role that bushmeat plays in nutrition, food security and income is needed. Finally the impact of declining bushmeat supplies on poor people’s livelihoods and the effectiveness of their coping strategies, such as substitution with alternative sources of protein, including fish where available, need to be assessed, as little is currently known. New research is forthcoming, for example the MacArthur Foundation will be funding David Brown at ODI for the next two years to undertake a review of the linkages between the bushmeat trade and poor peoples’ livelihoods.

From the evidence available, the bushmeat trade in west and central Africa is best tackled by **putting the policy and legislative framework into place** to encourage responsible logging in production forests and community-based responses where appropriate. Where communities have the right to manage their own forest and wildlife resources, and are able to exclude outside hunters, within a context that encourages and enables them towards sustainable utilisation, experience suggests there is a win-win solution for wildlife and poverty reduction. However, where there is growing poverty, conflict, high mobility of human populations, weak tenure and an unstable political environment, the scope for successful intervention is low. But, above all, effective tackling of the bushmeat trade requires a concerted attack on the ‘root’ causes of illegal logging and bushmeat harvesting i.e. corruption, weak governance and poverty.

The lack of national level information, and the current limited understanding of bushmeat-livelihood linkages, constrains government and donor willingness and ability to integrate concerns about the bushmeat trade into development policy processes.

6 Pro poor Conservation

6.1 Introduction

In Sections 3, 4, and 5 we have reviewed opportunities for leveraging poverty reduction through supporting poor people's efforts to derive wildlife-based livelihoods directly from available wildlife assets, whether through community based wildlife management regimes, sustainable bushmeat management or pro poor tourism. In Section 6 we review the implications of wildlife as a public good, and the extent to which resulting conservation initiatives integrate and monitor poverty issues.

There is considerable debate within the conservation community as to the need to embrace development goals and processes in order to achieve conservation. For many conservation organizations this is an evolutionary process with its most recent roots in the CBNRM approaches launched in the 1980s. However, there are still many conservation groups that do not profess specific development interests.

Box 15: Illustrating the ongoing debate about protected areas

The Science article "Effectiveness of Parks in Protecting Tropical Biodiversity" is a good example of renewed efforts to prove that protected area systems are key to the protection of biodiversity, concluding that the most significant factors in that protection are the density of park guards and the level of enforcement of rules banning resource use, rather than any degree of local participation (Bruner et al 2001).

Yet, in another Science article, Musters et al (2000) point out that to depend on protected areas for conservation in Africa without investing in economic and social development is wholly unrealistic, and that it is insufficient to take a simplistic, compensatory approach to economic losses suffered by communities impacted by conservation activities.

The main policy synergy between conservation and development is the sustainable use of natural resources by the poor. For development agencies sustainable use is key to achieving the Millennium Development Goals, and for many conservation agencies it is key to attaining species survival. Tackling the unsustainable use of wildlife resources is therefore a significant area of conservation-development synergy. The concept of sustainable use has been enshrined in the Convention on Biological Diversity, which most developing country governments have now signed. Similarly in 1992 the CITES Conference of Parties recognised that "commercial trade may be beneficial to the conservation of species and ecosystems and/or to the development of local people when carried out at levels that are not detrimental to the survival of the species in question".

The main policy trade-off between conservation and development is the removal of land from development potential into protected areas, particularly when that land has high value in an alternative use such as grazing for livestock, crops or supplying other resources such as building materials. Governments and donor agencies see protected areas as serving a number of important functions, including conserving the national and international public goods values of wildlife. Protected area strategies tend to result in the complete or partial exclusion of those local poor people who are most dependent on natural resources, who live in areas where there are few livelihood alternatives and receive little or no compensation for livelihood opportunities lost. From this perspective, wildlife conservation is effectively 'supplied' by poor countries, with the opportunity costs borne by poor people, and the benefits enjoyed primarily in wealthy countries.

6.2 Wildlife as ‘Public Good’

As well as being an important livelihood asset for the poor, wildlife is also an **international public good** (seen Section 1.3). Wildlife is both a regional public good, since it has the characteristic of being a cross-border benefit shared by more than one country (e.g. through wildlife migration, and through the cross-border synergies of developing a wildlife tourism industry such as shared security, combined tourism circuits) and a global public good because of the option values preserved in biological diversity and the existence values attached to species.

Box 16

“The provision of Global Public Goods is still a relatively new process but growing global pressures have increased the international need for a response to the challenges they pose.”

World Bank Website

International public goods are associated with national level policy failure. While individual governments may not see wildlife as a priority in national development strategies such as PRSP processes, at a regional or international level this may constitute policy failure because of wildlife’s value as an international public good. The cumulative omission of wildlife within a region and internationally means it will be ‘under-supplied’, as individual governments are not willing to fund the collective action required for its management, conservation fund flows are insufficient to compensate for this, and there is no institution to fill the international governance gap. This indicates a need for action at regional or international level to ensure that the collection action needed for wildlife management is funded, and that governance is provided for at supranational level. As yet, the international policy and institutional response to wildlife as an international public good, e.g. through GEF, has been piecemeal and insufficient.

Box 17

Moving to a new interpretation of Global Public Goods embraces three distinct elements. The first element is that of moving from a concept of non-exclusion to inclusiveness or “publicness of consumption”. The second, is building in the optimal distribution of benefits, in terms of the utility gained from a GPG or the “publicness in the distribution of benefits”. And the third, is the element of public choice in selecting the mechanisms for GPG provision or “publicness of decision-making”

GPG financing remains a very small component of total donor funding. Even major international donors like the World Bank, who recognise the importance of GPGs, devote relatively few resources to this type of good.

Towards Earth Summit 2002, Economic Briefing No. 3

In developing mechanisms to support wildlife as an IPG it is vital to consider poverty linkages and to ensure that the voices and needs of the poor are heard. International public goods ought to genuinely benefit all – including developing countries (Guillaumont, 2002). Thus the conservation of wildlife *solely* to preserve its existence or option values is likely to place considerable costs on poor people in rural areas of developing countries, where much of the world’s biodiversity is located. It is important to ensure that poor people are able to access and benefit from wild resources; both to encourage sustainable use and to ensure wildlife-human conflict is contained. The rationale of GEF already acknowledges that the protection of wild resources as a global public good often places burdens on developing countries and their poorer citizens, who have to restrict their own development and livelihood options accordingly.

The argument that wildlife is an international public good constitutes a supplementary argument to our poverty-driven arguments concerning the importance of wildlife resources, and has important

implications for donors. A number of proposals have been put forward for the next steps in addressing international environmental public goods, including:

- Adjusting official lending programmes to support a degree of IPG provision at the national level.
- The use of market signalling to create private sector incentives akin to the recent \$1 billion invested by the World Bank into research on communicable diseases.
- Grant based finance to be used strategically for critical IPGs e.g. technology transfer of environmental sound technology.
- GEF to become single umbrella for instruments to enact all Multilateral Environment Agreements, with consistent annual contributions from national governments.
- A strengthened UNEP or new global environment body to assist with the multi-sectoral and multi-level integration required for managing IPGs, that would work with groups right down to local level.

6.3 To What Extent Are Conservation Initiatives Pro Poor?

There do not appear to have been any sector-wide reviews of the extent to which poverty considerations are integrated into conservation initiatives. The best-known examples of pro poor conservation initiatives are the CBWM projects, though, as we concluded in Section 3, many of these initiatives cannot yet demonstrate delivered impact on poor peoples' livelihoods. It is more difficult to assess the extent to which government and donor-sponsored conservation programmes outside CBWM take poverty issues into account.

The findings of our review of PRSP processes are given in Section 7, and broadly conclude that wildlife-poverty linkages have not to date been covered explicitly in these; however, we have not surveyed national conservation policy documents, such as National Environmental Action Plans, National Biodiversity Strategies and National Strategies for Sustainable Development, or sectoral policy documents, such as those for forestry.

In reviewing non-government conservation initiatives, where information is readily available, we conclude that the **degree to which poverty issues have been mainstreamed and monitored within conservation organisations varies greatly, but is disappointingly low on average.** Within those organizations that aim to integrate livelihoods and conservation, monitoring is often weak, and successful implementation is constrained by the need satisfy complex goals. 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. The key international players in terms of investing in conservation include the World Bank, UNDP, UNEP, the Global Environment Facility (operated by the World Bank, UNDP and UNEP), the International Union for Conservation and Nature (IUCN) and the international conservation non-government organisations (NGOs) in the US and Europe. These groups collaborate for specific initiatives. A good example is the **Critical Ecosystems Preservation Fund (CEPF)**, established by Conservation International (CI) with initial investments of \$25 million each by WB, GEF, CI, the MacArthur Foundation and the Japanese Government. CEPF aims to invest \$150 million over the next five years in community, NGO and private sector initiatives to conserve biodiversity 'hot spots', many of which are also home to significant numbers of poor people.

The World Bank has built up a portfolio of conservation projects worth about \$2 billion over the past decade. The Bank helped to fund a series of major Integrated Conservation and Development Projects (ICDPs) in the 1980s and 1990s, which attempted to deliver integrated solutions to the issues of synergies and trade-offs at area level. ICDPs have been the subject of extensive review and adjustment

since Wells and Brandon (1992) examined 23 of these initiatives and found that, although many of the projects had delivered benefits for local people, principally through income gains and improved access to social services, in virtually all of the projects the critical linkage between development and conservation was missing or obscure, local people were treated as passive beneficiaries rather than active collaborators and there was little evidence of local people being partners in the process.

The Global Environment Facility was established after the Rio Summit in 1992 to support the 'incremental costs' that developing country governments incur in their efforts to conserve global public goods. GEF has four focal areas: biodiversity, climate change, international waters, and ozone layer depletion, and the issues of land degradation, primarily desertification and deforestation, as they relate to each focal area, are also addressed. The Convention on Biological Diversity, the UN Framework Convention on Climate Change and the Montreal Protocol on Substances that Deplete the Ozone Layer are all addressed with GEF financing. GEF is run by the World Bank, UNDP and UNEP, and has its own Secretariat, as well as a focal point in each country. GEF has a portfolio of more than 400 biodiversity projects in 140 countries worth a total \$5.4 billion. To date DFID has channelled £215 million to GEF and a new replenishment is now being finalised. To date there do not appear to have been any reviews of the impact of GEF projects on poverty, lessons learned about enabling poor people to participate or the extent to which GEF financing has compensated poor people for the 'opportunity costs' of conservation. However, GEF is about to undertake a two-year 'Review of Human Impacts of GEF-Financed Projects (GEF 2002), the findings of which should help answer these questions.

Conservation NGOs in the US and Europe invest significant resources each year in developing countries. Table A11 in Annex 1 gives an overview of four large NGOs, based on a review of their websites. There is a strong contrast between the apparent centrality of poverty issues to the work of WWF-UK for example, and the fact that poverty is hardly referred to on the websites of The Nature Conservancy and WWF-US. The growth of community based conservation in the 1980s and 1990s saw many NGOs move towards engaging with the poor 'voice' in conservation processes. Fauna and Flora International (FFI), WWF-UK, Zoological Society of London (ZSL) and Birdlife International are examples of UK conservation charities with clear development goals, pursuing strategies for sustainable resource use in order to achieve the species conservation. DFID recently signed a new four-year Programme Partnership Agreement with WWF-UK, which recognises WWF-UK's commitment to mainstreaming consideration of poor peoples' livelihoods into its work.

Box 18: Conservation International's Conservation Concessions

Concessions with governments:

- *Guyana*: Operating under the existing Forestry Law, CI is seeking a 25-year Timber Sales Agreement, to be managed for conservation. CI currently has an Exploratory Permit for 80,000 hectares along the upper Essequibo River, under which we are allowed to conduct the studies necessary to apply for a long-term concession.
- *Peru*: After discussions with CI and its partners in 2000 and 2001, the Peruvian Government included a provision in its new Forestry Law that legally permits conservation concessions as a competitive land use. In late July 2001, the Asociación para la Conservación de la Cuenca Amazónica, a local Peruvian NGO, became the first group to be granted a conservation concession under the new law. The concession encompasses an area of approximately 135,000 hectares in the lower portion of the Los Amigos River watershed.
- *Cameroon*: The government of Cameroon recently set aside an area of timber concessions between the Boumba-Bek and Dja Reserves, to be occupied by profitable conservation uses. CI is investigating the potential for a conservation concession in this context.

Contracts with indigenous/community groups:

- *Guatemala*: Recent economic analyses in the Maya Biosphere Reserve show that real logging revenues to local communities are likely to decline rapidly on a per capita basis over the next 20 years. While communities are required to prevent destructive uses of the forest in order to retain logging rights, with the decline in revenues, they would lose this incentive. Working under the framework of existing community concessions with the government, CI is developing a conservation concession contract with communities designed to provide payments, scholarships, and direct employment to allow them to continue to function as protectors of their concessions.

Conservation International Website

Many conservation NGOs are actively seeking new ways of bringing additional land under conservation management. The implications of this for poor peoples' livelihoods are not well understood, though should be examined, as this approach is effectively expanding protected area systems. In the US land acquisition has usually been through outright land purchase or the use of easements, as pioneered by The Nature Conservancy. In developing countries land purchase by an international NGO is generally not an option, so there has instead been a focus on using instruments such as debt for nature swaps, easements and conservation concessions. CI has pioneered the concept of **conservation concessions**, whereby payments are made directly to a developing country government or its citizens to compensate for revenue or employment lost by not exploiting a given resource (see Box 18). However, there appears to be little examination of the implications of conservation concessions for local people and poverty, either by the NGOs or their government partners.

6.4 Conclusions

Wildlife is both a livelihood asset and a public good, which leads to trade-offs in wildlife policy, particularly with regard to the exclusion of poor people from wildlife use in the name of wildlife conservation. Protected area systems can help safeguard the international public good value of wildlife through species preservation, but the costs should be borne internationally, not by local poor people. The growing emphasis on land acquisition for conservation by NGOs in collaboration with donors and developing country governments may be putting the rights of some poor people at risk and warrants further attention.

DFID's collaboration with WWF-UK on integrating sustainable livelihoods issues into its conservation work is a good example of pro poor conservation in action. However, the typical conservation NGO is still struggling with the relevance and practice of targeting poverty reduction in its day-to-day operations.

We conclude that governments and donors must ensure that the synergies between poverty reduction and conservation are realised in national development strategies and in the positions taken on wildlife issues by conservation organizations and in international fora. The challenge is to ensure that poverty-focused initiatives, such as those identified in Sections 3, 4 and 5, 'do no harm' to the international values of wildlife, and that the species conservation initiatives that focus on those international values, as are discussed in Section 6, do so in a 'pro poor' way.

7 Policy and Institutional Issues

7.1 Introduction

In this Section we summarise the key policy and institutional issues governing wildlife-poverty linkages. We present the findings of a specific piece of research assessing the extent to which these linkages are reflected in the Poverty Reduction Strategy Papers and DFID country strategy documents as available for fourteen countries known to have significant wildlife assets.

7.2 National Level Policy and Institutional Issues

The following key policy and institutional issues govern access to and use of wildlife by the poor. Where wildlife is an important livelihood asset for the poor, these issues should be reflected in development policies and institutional responses:

- **Rights and ownership.** Wildlife resources are either owned by the state, communally or by individuals. Where wildlife is owned, or access to wildlife controlled, by the state efforts to enable communities to improve their wildlife-based livelihoods have generally had little success (e.g. Kenya). Where wildlife resources are owned 'in common', as is often the traditional case (e.g. Mt Cameroon case study), the sustainable use of those resources depends largely on communal rights to use wildlife, community cohesiveness, scope for limiting access to wildlife and the prevailing economic incentives.
- **Governance.** Weak governance undermines any development process, whether at national, local or international level. Wildlife-based livelihoods are no exception. Weak institutions, corruption and weak natural resource management systems in many countries, particularly for forest resources, threaten livelihood sustainability. Local level governance systems are often compromised by weak community institutions and conflict over the rights to benefits.
- **Regulation and enforcement.** Wildlife policy and legislation often constrain wildlife-based livelihoods, particularly where it bans activities (e.g. hunting, game meat marketing), where it requires expensive and time-consuming bureaucratic processes (e.g. licences, land management status approval), where it fails to police/enforce effectively or where it fails to provide the necessary legal framework. For example, delays in producing policy guidelines and regulations (e.g. Tanzania's Wildlife Management Area regulations and guidelines) can seriously impact upon the timely realisation of benefits and progress towards sustainability.
- **Sharing of revenue between national and local levels.** Many governments have little incentive to pass on lucrative wildlife-related revenues (e.g. from tourist hunting) to communities, given weaknesses in accountability and governance. The Kunene, Mbomipa and Mt Cameroon projects all highlight the need to ensure a 'fair' distribution of value between government and local people, if livelihood impacts are to be significant and sustainable. It is all too easy to 'tax' wildlife livelihoods where wildlife is effectively the 'common' property of poor people.
- **Local institutions and benefit sharing.** For poor individuals and communities to benefit from wildlife, having capable and accountable community wildlife management institutions is as important as resolving the ownership, regulatory and fiscal issues. The case studies highlight the need to establish equitable benefit sharing processes at the community level far earlier in the process than generally happens, as well as more effort needed to develop local wildlife damage assessment and compensation schemes.

- **Private sector partnership.** Successful delivery of local level wildlife-based livelihood impacts is associated with fair and lasting partnerships between the private sector and poor people (e.g. Namibia, South Africa). The private sector is in no doubt as to the linkages between wildlife and profits – as the rapid growth of wildlife tourism across sub-Saharan Africa from 1980-2000 demonstrates. The challenge is to harness this energy for poverty reduction.
- **Institutional Capacity.** For any organisation to function it needs a mandate, structure, leadership, resources and skills. Enabling effective community institutions (for collective action) can be time consuming and expensive, and yet is key to the management of CPRs.

7.3 Supranational Policy and Institutional Issues

As discussed in Section 6.2, the existence and options values of wildlife are international public goods, the net benefits of which flow strongly to the North. International agreements such as the CBD and CITES recognise the mismatch between the costs and benefits of producing and maintaining these goods, which leave poor countries at major disadvantage. The challenge is to find appropriate and fair mechanisms for ensuring a) that these goods continue to be supplied and b) that collective action by the poor is encouraged and the poor compensated for their role in safeguarding wildlife.

Supranational governance of biodiversity. This issue is being considered in a number of for a. What is not clear is the extent of national government commitment to increasing the role and capacity of GEF and UNEP, or of developing alternative institutional structures.

Enabling CBD and CITES complementarity. CITES, for example, is highly valued as a tool for protecting endangered species. However, a recent study by TRAFFIC and IIED (Roe et al 2002) concludes that there are examples where CITES has reduced income available to local communities without bringing any obvious conservation benefit. They recommend that the 'CITES community' be sensitised to the livelihood issues associated with wildlife trade and suggest ways in which the underlying issues could be tackled including integrating socio-economic considerations, avoiding blanket bans and exploring labelling opportunities.

Meeting the costs of collective action. One of the challenges in enabling poor communities to manage wildlife assets sustainably is the cost of collective action required. Possible ways in which the transaction costs necessary for enabling poor communities to engage in collective action could be met include: first, DFID and other donors could justify exploring ways of engaging cost-effectively in creating collective action groups, recognising that collective action brings many benefits beyond wildlife use (e.g. through CBWM). Second, there is a clear argument that the international conservation beneficiaries should fund the costs of collective action, with the GEF as one possible source of funds to underwrite these transaction costs. The third option is for the private sector to underwrite these costs, which implies government and donor investment in creating the framework, incentives and partnerships necessary for the private sector to increase its engagement in pro poor wildlife management.

7.4 Wildlife in Development Strategy Processes

In this Section we review the extent to which wildlife-poverty linkages, and the policy and institutional implications of these linkages, are considered in Poverty Reduction Strategy Papers (PRSPs), where available, and DFID Country Strategy Papers (CSPs) for fourteen countries: Bolivia, Brazil, Cameroon, Ghana, Guyana, India, Indonesia, Kenya, Malawi, Nepal, Nigeria, South Africa, Tanzania and Uganda. Ideally we would have extended the review to include other relevant government policy documents, such as those for environment (e.g. National Strategies for Sustainable Development, Biodiversity Action Plans, National Environmental Action Plans) and sectoral agencies (e.g. tourism, forestry), as well as for

other donors. However, given our focus, and time and resource constraints, the review conducted for this Study has been limited.

PRSPs or interim PRSPs have been prepared for nine of the fourteen countries. PRSPs are three-year strategy papers that integrate macroeconomic and sector strategies and set out a strategy for achieving the MDGs in each country. They are being prepared by national governments in collaboration with the World Bank and IMF and form the basis for Bank and Fund concessionary lending, as well as for debt relief under the enhanced HIPC. PRSPs are intended to be country-driven, with broad participation of civil society, and based on an understanding of the links between public actions and poverty outcomes (World Bank, 2002). In theory PRSPs are comprehensive documents that capture the drivers of poverty as well as possible sources of economic growth and poverty reduction.

We reviewed the most recent CSP for each of the fourteen countries, though our findings reflect the fact that CSPs are rapidly becoming outdated in terms of documenting country priorities. The new DFID Country Assistance Plans (CAPs) will assess how best DFID can help to implement the PRSP, rather than starting from DFID's analysis of what a government should do to reduce poverty.

Table A12 in Annex 1 gives a qualitative indication of the findings by country. Of the nine PRSP documents reviewed for the Study, wildlife-poverty linkages are identified in five (Bolivia, Ghana, Kenya, Malawi and Nigeria). Of the fourteen CSPs examined only two, Kenya and Tanzania, mention wildlife.

As is to be expected, rural development strategies tend to focus on agriculture. Creating off-farm employment is a priority for a number of PRSPs (Bolivia, Ghana, Guyana, Kenya, Malawi and Uganda) and for all CSP rural development strategies, though wildlife-based livelihoods are not explicitly explored as an option for this.

Tourism gets surprisingly limited attention. In the PRSPs for Bolivia, Guyana and Malawi tourism is seen as a potentially important generator of rural employment. Where tourism is mentioned in a PRSP (as ecotourism is in Guyana for example) it is often not mentioned in the CSP. In Tanzania, where tourism is mentioned in the CSP, it gets no mention in the PRSP. Only in the South African CSP is tourism presented as a possible livelihood activity for poor people. These findings, together with the DFID Rural Livelihoods Adviser interviews conducted for this Study, suggest that the role of tourism in pro poor rural growth and poverty reduction is not well understood.

Bushmeat is mentioned in three PRSPs (Bolivia, Guyana and Nigeria) though only Bolivia's PRSP looks at the subject in any depth. The importance of non-timber forest products is reflected in four PRSPs (Bolivia, Kenya, Nigeria and Tanzania). **Bushmeat is not mentioned in any of the CSPs** although non-timber forest products (NTFPs) more broadly receive some attention. Community based forestry management themes are identified as priorities in CSPs for Brazil, Cameroon, Guyana, Indonesia, Nepal and Nigeria.

CBNRM and tenure issues are raised in some papers, usually in terms of forest management, but not in direct connection with wildlife. The need for "community involvement" or "civil society participation" in resource management is included in the PRSP forest management strategies of Bolivia, Cameroon, Kenya and Malawi.

All fourteen countries are signatories to the CBD, so have a certain level of commitment to biodiversity protection. The conservation of biodiversity through protected areas is an explicit priority of the PRSPs reviewed except those for Ghana, Tanzania and Uganda. Six CSPs address conservation and protected area issues (Bolivia, Brazil, Cameroon, Kenya, Malawi and Tanzania) and four have conservation related agendas (Bolivia, Brazil, Cameroon and Malawi). In general though the papers reviewed do not link conservation to poverty reduction strategies.

We conclude that wildlife-poverty linkages appear to be under-represented in PRSPs and CSPs, and that they receive less attention in CSPs than PRSPs. We would argue that the overall lack of attention to wildlife-poverty linkages is a weakness. The likely reasons include:

- **PRSPs are still very new, with no standard preparation process or set of contents.** The process of preparing PRSPs differs greatly between countries in terms of local ownership, extent of participation, donor involvement and degrees to which all sectoral ministries contribute. They differ greatly in degree of detail. While some development practitioners expect all significant poverty reduction measures to be identified in PRSPs, particularly in more detailed actions plans, others argue that PRSPs do not identify sectoral and sub-sectoral priorities, but outline only the key elements of the national poverty reduction strategy, leaving the detailed implementation to be covered in other policy documents.
- **There are many initiatives underway to review and reform PRSP processes** and outputs, including those by national governments as well as multi- and bi-lateral donors. PRSPs are still a very new mechanism for agreeing and implementing poverty reduction agendas. The Participatory Poverty Assessments (PPAs) that are meant to support their preparation are known to be currently weak in a number of areas, notably in reflecting linkages between environment and poverty (Bojo and Chandra Reddy 2001, Thin et al 2001, DFID 2001) and between common pool resources and poverty (Brocklesby and Hinshelwood 2001).
- **There is a tendency by development agencies to assume low dependence of the poor on wildlife.** There is generally little data available on the true extent of the dependency of poor people on wildlife at national level, as identified in Section 2.
- **Responsibility for identifying and tackling wildlife issues tend to be split between different agencies** with divergent responsibilities and policy aims e.g. tourism, forests, protected areas and environmental management are often handled by separate ministries or agencies. Sectoral policies may reflect certain aspects of wildlife resources, but there is no mechanism for aggregating the significance of wildlife resources as a national asset. The capacity of tourism ministries appears to be particularly weak.
- **Responding to the linkages requires lots of small adjustments.** The conclusions from Sections 3-6 suggest that the responses required by government include policy and institutional change and the integration of wildlife into ongoing development processes, such as tourism and rural development.
- **Much of the international interest in wildlife both at policy and project level has been conservation driven** e.g. through CBD, CITES and GEF. Significant levels of funds are channelled through international conservation NGOs and bypass national planning processes. This reflects that the international public good aspect of wildlife is likely to result in national level policy failure, and will need to be addressed at international level.

7.5 Conclusions

Sections 2-6 have indicated the ways in which poor people depend on wildlife resources for their livelihoods. It is clear that wildlife plays a role in the livelihoods of many poor people, and that this should be reflected in government and donor policies. What is less clear is the relative importance of wildlife-related intervention in poverty reduction. It is hard to argue from a position of incomplete evidence that wildlife-related interventions should be any higher or lower a priority than other poverty reduction strategies. For example, livestock and agriculture are generally more important livelihood assets to poor people than is wildlife.

However, the facts that wildlife is intimately linked into the livelihoods of millions of poor people, and that the potential for using wildlife-related approaches to enhance livelihoods appears to exist, should be reasons enough to ensure that key policy processes, such as those underlying PRSP and donor assistance plan preparation, take wildlife-poverty linkages into account and prioritise appropriate interventions.

8 Conclusions and Implications

8.1 How Dependent are the Poor on Wildlife?

Wildlife is one of many assets available to poor people for livelihood diversification, security and improvement. For the majority of these people livelihood opportunities are limited. A significant proportion of their food is hunted or collected from the wild, and particularly in times of stress, such as drought. Medicines, fuel and building materials are collected from the wild. Poor people use wild resources to build and diversify their livelihoods, whether through trading (e.g. honey), supplying inputs (e.g. handicrafts to the tourism industry), or formal and informal employment. Wild resources are often key to local cultural values and traditions. These same people must also bear the costs of living with wildlife, particularly in terms of threat to lives and livelihoods (e.g. livestock predation). Conservation initiatives also often come at the expense of poor peoples' livelihoods; both directly in terms of unfair distribution of net benefit flow from conservation and indirectly from the opportunity cost of land. However, for many of these marginalised areas the potential for wildlife to be a source of long-term competitive advantage is underestimated. As wildlife scarcity increases, so the intrinsic and commercial value of remaining reserves increases, thus increasing the opportunities for the poor to build viable wildlife-based livelihood strategies.

We estimate that wildlife plays a significant role in the lives of up to 150 million poor people. Of the estimated 1.2 billion people who live on less than the equivalent of one dollar a day, about 250 million live in agriculturally marginal areas, and a further 350 million live in or near forests. Wildlife plays some role in the lives of many of these people, and is thought to be a primary livelihood asset in the lives of up to one-eighth of them. Where wildlife is declining or access to wildlife is denied, poor people adapt, but often at a cost to their livelihoods in terms of reduced income, fewer diversification opportunities and increased vulnerability.

8.2 What Scope for Intervention?

The scope for wildlife-based interventions to deliver poverty reduction is different for each of the four themes, though the lack of quantitative data makes it hard to estimate the scale of poverty impact through any of them. From the review, it is unlikely that the scale of potential impact would make wildlife-based interventions in general a priority over, say, those to support agriculture-based livelihoods. However, the scale of actual and potential impact is likely to be high enough to warrant intervention for specific groups of poor people including forest dwellers and forest-adjacent people; people living near protected areas; those in remote wildlife-rich areas; and those in high tourism potential countries.

The livelihood impact of many **community-based wildlife management (CBWM)** initiatives has been disappointing, particularly in terms of delivering economic benefits to the household level, though CBWM has brought significant employment and income generating opportunities to some remote communities, notably through wildlife tourism, for example in Namibia. However, many CBWM initiatives do appear to have delivered significant empowerment and governance impacts and improved well-being – communities place a high value on having control over their wildlife resources. CBWM faces significant constraints, including high barriers to entry for communities and high transaction costs for donors. The extent to which CBWM can help trigger broader rural development, particularly for the remote poor, is not yet clear. This warrants further investigation, and is the subject of ongoing DFID-funded work in Namibia and Tanzania.

Tourism is the fastest growing industry in the world, and tourism in developing countries is growing twice as fast as that in the rest of the world. Wildlife tourism presents a major source of future comparative advantage for some poor countries, including many in southern and eastern Africa.

However, with the exception of community-based tourism, the bulk of tourism still marginalises poor people. The challenge is to test and apply mechanisms for increasing the share of the poor in tourism value added through 'pro poor tourism'. These approaches are fairly new, but the evidence to date indicates that they may offer significant potential for impact on poverty.

The scope for sustainable management of bushmeat appears to be limited except where integrated into sustainable community forest management. Where poor communities have the right to manage their own forest and wildlife resources, within a context that encourages and enables them towards sustainable utilisation, experience suggests there is a win-win solution for wildlife and poverty reduction. However, where there is growing poverty, conflict, high mobility of human populations, weak tenure and an unstable political environment, the scope for successful intervention is low.

Pro poor conservation addresses the need to ensure that poverty issues are integrated into the work of the leading conservation agencies. The World Bank has built up a portfolio of conservation projects worth about \$2 billion over the past decade. The Global Environment Facility has a portfolio of more than 400 biodiversity projects in 140 countries worth a total \$5.4 billion and is now embarking on a two-year assessment of the 'human impacts' of this portfolio. The leading conservation NGOs spend tens of millions of dollars on conservation initiatives in developing countries each year. The challenge is to integrate the voice and needs of poor people into efforts to conserve wildlife as an international public good.

Box 19: Study Conclusions

- **Wildlife and wild foods are a source of both food and reduced vulnerability** for the poor in times of stress. Steady loss of access by the poor to wildlife is reducing opportunities for livelihood diversification and increasing vulnerability.
- **Wildlife-based livelihoods are a means of promoting sustained pro poor rural growth and improved governance:**
 - **Wildlife can be a means of reaching the poorest** i.e. the remote poor living in agriculturally marginal areas, through impact of CBWM on empowerment and improved governance of community institutions.
 - **Wildlife is a means of promoting employment and enterprise development** through employment and enterprise opportunities linked to wildlife, including businesses linked to tourism, hunting, live animal trade, wildlife farming and game meat production.
 - **Wildlife tourism could be a source of significant future comparative advantage** for some countries. In particular, the demand for 'natural' wildlife tourism products is growing, while the supply is steadily diminishing. There appears to be some scope for increasing the share of the poor in tourism value added and for influencing the overall impact of tourism on poverty reduction.
- **Wildlife is a common pool resource**, and the one for which livelihood linkages are least well understood. CPRs offer specific challenges, notably how to foster sustainable use and collective action.
- **Wildlife, biodiversity and natural forests are international public goods.** Policy and governance is therefore required at supranational level. Responses must reflect the needs and voices of the poor, and ensure that the poor are compensated for costs incurred in safeguarding IPGs.

8.3 Implications for Action

Governments, donors (including the International Finance Institutions), the private sector and civil society all have a role in actively supporting and promoting wildlife-based approaches to poverty reduction. In Section 8.3 we suggest goals, actions and responsibilities for each of the four themes.

CBWM can help improve livelihoods, through its impact on governance, empowerment and local economic development. The main challenge is that proponents of CBWM still need to demonstrate that it can enable growth in areas remote or excluded from markets (i.e. broaden and deepen local economic development), and at acceptable transaction costs. CBWM has applications in most countries with proven wildlife-enterprise opportunities, especially tourism.

Table 1. Community Based Wildlife Management: General Implications

Theme: Continue to test community-based wildlife management as means of empowering communities, improving governance and promoting local economic development, especially in remote and marginal areas.		
Goal	Specific Actions	By Whom
1. Poor peoples' rights and tenure re wildlife established and enforced	<ul style="list-style-type: none"> • Incorporate into PRSPs, other national and donor policy processes 	<ul style="list-style-type: none"> • Government, with donor support, consulting all stakeholders
2. Barriers to entry for poor communities removed	<ul style="list-style-type: none"> • Simplify regulations and guidelines • Support pro poor tourism approaches 	<ul style="list-style-type: none"> • Government, with donor support
3. Private-community partnerships established	<ul style="list-style-type: none"> • Incentives and rewards for private-community partnerships including fiscal • Support broker-intermediaries to help set up and sustain deals 	<ul style="list-style-type: none"> • Government policies to provide incentives • NGOs as broker-intermediaries
4. Strong community institutions in place	<ul style="list-style-type: none"> • Help build existing resource management institutions at community level • Ensure institutions for resource management not duplicated at local level 	<ul style="list-style-type: none"> • Local government, private sector, civil society
5. Equitable benefit sharing mechanisms working	<ul style="list-style-type: none"> • Encourage guidelines for income disbursement at local level, with household as well as communal benefits 	<ul style="list-style-type: none"> • Government, civil society

6. Poor able to engage as entrepreneurs	<ul style="list-style-type: none"> Encourage poor people to be entrepreneurs in wildlife and wildlife-linked businesses and partnerships, building on existing communal approaches 	<ul style="list-style-type: none"> Private sector, civil society, donor funded enterprise programmes
7. Upgrade community tourism product and promote	<ul style="list-style-type: none"> Community and private sector tourism associations to facilitate product upgrade and marketing e.g. NACOBTA 	<ul style="list-style-type: none"> Private sector, civil society

Pro poor wildlife tourism, integrated into pro poor tourism approaches generally, presents a significant potential impact on poverty. Increased priority should be given to evaluating lessons learned to date, for example from the DFID-funded TCF projects and encouraging further testing and application of mechanisms, such as those adopted in the completed TCF project in Gambia, to increase the share of the poor in tourism value added. Pro poor tourism approaches could be adopted in any area where wildlife tourism presents an existing and potential source of competitive advantage. This includes obvious countries such as South Africa, Namibia, Zimbabwe, Zambia, Mozambique, Tanzania, Kenya, Uganda and Rwanda, as well as China, India, Nepal, Brazil, Guyana, Costa Rica and Madagascar. Countries with forest-dependent wildlife have significantly less potential than those with open areas and visible wildlife populations, for obvious reasons, though tourist hunting could be an opportunity in parts of west and central Africa.

Table 2. Pro Poor Wildlife Tourism: General Implications

Theme: Promote pro poor wildlife tourism as a component in pro poor tourism approaches to improve the share of the poor in wildlife tourism value added		
Goal	Specific Actions	By Whom
1. General economic climate conducive to tourism investment	<ul style="list-style-type: none"> Adjust policies and regulations to: <ul style="list-style-type: none"> Control 'red tape' for inwards investment Create incentives to reinvest profits Build capacity for local provision of goods and services needed by tourism industry 	<ul style="list-style-type: none"> Governments with donor support
2. Poor people to get increased employment & business opportunities and other benefits from tourism	<ul style="list-style-type: none"> Create incentives for private and public sectors to hire locally and provide training in tourism skills for poor people Improved marketing of community tourism products 	<ul style="list-style-type: none"> Government, with donor support Private sector
3. Enable tourism multipliers to increase impact on local economic development	<ul style="list-style-type: none"> Influence tourism planning at national and local levels to increase 'planning gain', whereby pro poor measures are built in from the start Promote local investment by tourism 	<ul style="list-style-type: none"> Government with donor support Private sector, civil society

	<p>companies, including incentives for reinvesting profits and local sourcing</p> <ul style="list-style-type: none"> • Encourage spin-off businesses from tourism through dialogue and agreements between formal and informal sectors • Regulations and agreements promote local employment and training for local staff 	
4. Increased adoption of pro poor tourism measures by private sector	<ul style="list-style-type: none"> • Build awareness of private sector and disseminate learning about impact of pro poor tourism on company performance • Publish information about corporate social performance of tourism sector • Build shareholder awareness and enable access to corporate social responsibility information 	<ul style="list-style-type: none"> • Government, donors, private sector

Sustainable community bushmeat management, integrated into community forest management, may be possible in some areas where conditions are favourable. This is likely to include parts of several countries in west and central Africa. Those working on bushmeat issues should share information and lessons learned more widely to enable national level data to be assembled. Where sustainable bushmeat management is not possible, the impact of declining bushmeat on poor people needs to be understood.

Table 3. Sustainable Bushmeat Management: General Implications

Theme: Enable sustainable bushmeat and wild food management in areas where feasible, and support communities in finding alternative foods and livelihoods where these resources are declining.		
Goal	Specific Actions	By Whom
1. Linkages between bushmeat, wild foods generally and poor peoples livelihoods are better understood, including impact of declining wild foods on coping strategies	<ul style="list-style-type: none"> • Ensure research is poverty-focused, and findings shared within and between countries • Ensure work on food security incorporates role of 'wild foods' • Share information and lessons learned among NGO community and with development agencies 	<ul style="list-style-type: none"> • Government, donors, conservation NGOs
2. Significance of bushmeat and wild foods understood at national level	<ul style="list-style-type: none"> • Collect estimates of aggregate nutritional and income impacts of bushmeat and wild foods • Incorporate into PRSP and other relevant national policy processes 	<ul style="list-style-type: none"> • Government, donors, conservation NGOs
3. Supportive legal and regulatory environment in place, including law enforcement	<ul style="list-style-type: none"> • Incorporate into PRSPs and forest policies and regulations • Ensure framework in place to enable community management of wild resources 	<ul style="list-style-type: none"> • Government, donors, civil society
4. Illegal logging combated	<ul style="list-style-type: none"> • Support trade and policy environment that penalises illegal logging 	<ul style="list-style-type: none"> • Government, donors, private sector, civil society
5. Community based sustainable management of bushmeat in place where appropriate	<ul style="list-style-type: none"> • Establish legal tenure and use rights for communities, and adjust policies accordingly • Enable community management and monitoring of bushmeat resource, including 'exclusion' of non residents, licensing etc 	<ul style="list-style-type: none"> • Government, donors • Civil society, private sector

Pro poor conservation is a specific initiative to encourage and enable influential and resource-rich conservation organisations to mainstream poverty reduction, as a desired outcome of their work, into the heart of their operations. We note that to date **DFID is cited as having played a key role among donors in encouraging poverty-led conservation.**

Table 4. Pro poor Conservation: General Implications

Theme: Pro poor conservation		
Goal	Specific Actions	By Whom
1. Poverty reduction mainstreamed into conservation organisations and related donor programmes	<ul style="list-style-type: none"> • Support analysis, lesson learning and sharing of best practice as to conservation and development 'win-wins' • Improve tools for measuring and monitoring livelihood impacts of conservation projects e.g. those funded by GEF 	<ul style="list-style-type: none"> • Government, donors, private sector, NGOs, other civil society
2. Partnership strengthened between conservation and development organisations	<ul style="list-style-type: none"> • Encourage joint research into wildlife and poverty linkages, e.g. role of wild foods in food security 	<ul style="list-style-type: none"> • NGOs, donors, governments
3. Poverty reduction mainstreamed into international conservation policies	<ul style="list-style-type: none"> • Review implications of recent studies for the way CITES, CBD and GEF integrate poverty considerations 	<ul style="list-style-type: none"> • Governments, donors
4. Issues of supranational governance of global environmental public goods, including wildlife, and paying for collective action, resolved	<ul style="list-style-type: none"> • Make proposals for institutional response to need for supranational governance, including possible expansion of GEF, UNEP e.g. at WSSD • Agree roles and responsibilities, including funding commitments • Fund collective action by the poor to safeguard wildlife, and ensure voice of poor heard in process 	<ul style="list-style-type: none"> • Donors, governments, civil society

Annex 1: Tables Referred to in the Text

Table A1: DFID, DEFRA and FCO-funded wildlife activities

A) DFID	Wildlife related work
Bilateral Wildlife Projects	<ul style="list-style-type: none"> ▪ WILD is a national level policy, strategy and capacity building project for community wildlife businesses and rural development more broadly in Namibia (£1.0 million, 1999-2002) ▪ Mbomipa is a community hunting project in Tanzania, building the local institutions for community wildlife management and enabling auctions of hunting quotas (£1.9 million, 1997-2001) ▪ Mount Cameroon project focused on sustainable forest management, especially on potential bushmeat management systems (£10.6 million, 1995-2002) ▪ Other forest management projects with strong sustainable management focus, e.g. Indonesia, Nigeria, Ghana
Environmental Policy Department:	<ul style="list-style-type: none"> ▪ Financial and other support for Multilateral Environmental Agreements e.g. CBD, CITES, plus other international processes e.g. WSSD ▪ Publication '<i>Biodiversity – a crucial issue for the world's poorest</i>'
Enterprise Development/ Private Sector Partnerships:	<ul style="list-style-type: none"> ▪ Tourism Challenge Fund (now part of Business Linkages Challenge Fund) supports private sector partnerships for Pro poor tourism development: ▪ 10 grants approved in 3 rounds, worth total of £2.15 million. ▪ 3 substantially address wildlife tourism: NACOBTA in Namibia, African Wildlife Foundation in Tanzania, South Africa and Mozambique and Mboza/ODI in Southern Africa.
DFID Funded Research:	<ul style="list-style-type: none"> ▪ Livestock-wildlife interactions in Africa (1997-2001) ▪ Illegal hunting in Serengeti NP (1997-2000) ▪ Bushmeat in rural livelihoods of West Africa (2000-2001) ▪ Assessing livelihood impacts of wildlife in East Africa (2001) (R6828 and R7638) ▪ Analysis of involvement of communities and rural people in forest management in eastern and southern Africa (R7477) ▪ Case studies of common property resource management where tourism wildlife and pastoralism interact in Kenya (IIED, R7150) and towards ecotourism development in southern Kenya (IIED, PD099) ▪ Wildlife trade, trade controls and rural livelihoods (2002) (IIED & TRAFFIC, R7898)

<p>Joint Funding Scheme/ Civil Society Challenge Fund</p>	<ul style="list-style-type: none"> ▪ New 4-year Programme Partnership Agreement with WWF-UK agreed; will focus on building civil society capabilities, education in UK and rural livelihood improvements in main activities ▪ Under previous JFS with WWF: <ul style="list-style-type: none"> ○ Gashaka-Gumpti, Nigeria ○ Coastal forests, Kenya/Tanzania ○ Kunene/Caprivi, Namibia ○ Mamiraua/Varzea, Brazil ▪ Institutional Capacity Building for Community Forest Management for the maintenance and sustainable use of Kilum Ijim Forest, implemented by Birdlife International – Cameroon. ▪ ACT: Linking Communities into the tourism market in Uganda– aims to use tourism to eradicate poverty by promoting policies that enable poor people to participate in markets on equitable terms.
<p>B) DEFRA</p>	<p>Current scope of wildlife work</p>
<p>DEFRA: Global Wildlife Division (GWD)</p>	<ul style="list-style-type: none"> ▪ UK Management Authority for - and policy on UK participation in – the Convention on International Trade in Endangered Species (CITES), including initiating international debate within CITES on the bushmeat trade and its effects on endangered species. ▪ Commissioned UK Paper on “Bushmeat as a Trade and Wildlife Management Issue” (Brown & Hunter 2000) as presented to CITES (CoP11, Nairobi, 2000). ▪ Proposed to CITES to establish a Bushmeat Working Group. On establishment, continued support for the Group, including funding for meetings and related consultancies ▪ Commissioned research by FFI, ODI and NRI to analyse existing knowledge on the bushmeat trade, highlight gaps in data and understanding, and recommend further action (“Bushmeat – A Pilot Study”). The final report, entitled “Assessment of the Solution-orientated research needed to promote a more sustainable bushmeat trade in Central and West Africa” (Bowen-Jones et al January 2002), is now available. ▪ Support Tropical Forest Forum’s UK Bushmeat Working Group bringing together all UK-based stakeholders to pool and disseminate information. Ongoing support for Group Secretariat. ▪ Support and funding (£100,000) for UNEP’s Great Ape Survival Project (GrASP). ▪ Contributions to enforcement activities, including a successful prosecution of two London shopkeepers for smuggling bushmeat from endangered species into the UK.
<p>DEFRA: Environmental Protection International</p>	<ul style="list-style-type: none"> ▪ Manages Darwin Initiative for the Survival of Species, announced by the British Government at the Earth Summit in Rio, 1992. So far Darwin has committed £27 million to over 200 projects in 80

Division (EPINT)	<p>countries. Darwin projects include studies of:</p> <ul style="list-style-type: none"> ○ bushmeat research in the Sanaga-Cross area of Cameroon, Nigeria and Equatorial Guinea ○ sustainability of wildlife and rattan trades in North Sulawesi, Indonesia ○ community ecotourism, conflict and conservation in the Maasai Mara, Kenya ○ chameleons, conservation and communities in Madagascar large mammal conservation and sustainable resource use in Khen Khentii, Mongolia ○ big cat conservation and sustainable management in southern Africa
C) FCO (Environment Policy Department)	<p>FCO Environment Fund awards £3 million annually to projects that support the UK's international environment policy priorities. The fund encompasses a wide range of environment policies including conserving biodiversity. Projects funded include:-</p> <ul style="list-style-type: none"> • Dugong conservation and habitat protection along Andaman Coast and Gulf of Thailand • International workshop on biodiversity of Rodrigues Lagoon • National Law Enforcement Program for wildlife species in Jordan • Biodiversity strategy & action plan for Dujiangyan-Longxi-Hongkou Area, Sichuan • General management plan for Bosawas Biosphere Reserve, Nicaragua <p>FCO Sustainable Tourism Initiative implementing strategy for responsible outbound tourism from the UK.</p>

Table A2: Recent DFID-Funded Wildlife Work by NRI, IIED and ODI

International Institute for Environment and Development (IIED)	<ul style="list-style-type: none"> ▪ <i>'Whose Eden? An overview of Community-based approaches to wildlife management'</i> 1994 (desk review of case studies in Africa) ▪ "Take Only Photographs, Leave Only Footprints. The Environmental Impacts of Wildlife Tourism". 1997. Desk review. ▪ <i>'Enhancing Community Involvement in Wildlife Tourism'</i> with ODI, 1998. ▪ <i>'Sustainable Tourism and Poverty Elimination'</i> Study by IIED, ODI and Deloitte and Touche. 1999 ▪ <i>'Stimulating Sustainable Trade (tourism as a commodity)'</i> examined tourism in and around Addo Elephant Park in South Africa. ▪ <i>'Participatory Biodiversity Conservation in Brazil and Indonesia: Mamiraua and Danau Santarum'</i> case studies for NRAC in 1997 ▪ <i>'Biodiversity not Adversity'</i> for RLD's Linking Policy and Practice in Biodiversity Project (LPPB) by Izabella Koziell, 1998-2000. ▪ <i>'Living off Biodiversity'</i> for LPPB, edited by Izabella Koziell and Jacqueline Saunders, including paper on "Forests, biodiversity and livelihoods" by Steve Bass. ▪ ESCOR funded Study : <i>'Pro poor Tourism Strategies - A review of experience'</i>. With ODI and the Centre for Responsible Tourism. 2000-2001. ▪ EPD-funded production of Bio-briefs 1: <i>'Community-based wildlife management -Improved Livelihoods and Wildlife Conservation?'</i> and <i>'Stories from Eden -Case studies of community-based wildlife management'</i>. Both 2001. ▪ ESCOR funded study of the impacts of International Wildlife Trade Regulations on local livelihoods. With TRAFFIC. 2002.
Natural Resources Institute (NRI)	<ul style="list-style-type: none"> ▪ Forest Research Programme managed by NRI, including extensive research on NTFPs ▪ Sustainable Use of Wildland Resources: Ecological, Economic and Social Interactions: ▪ An Analysis of Illegal Hunting of Wildlife in Serengeti National Park, Tanzania, by Ken Campbell, Valerie Nelson and Martin Loibooki, funded by Livestock and Animal Health ▪ Research Programme ▪ ASSC Funded Research on Bushmeat in Ghana ▪ Community wildlife management in southern and eastern Africa – by Nigel Hunter and Dawn Hartley ▪ Technical inputs to ongoing Mbomipa, WILD bilateral projects and past projects e.g. ▪ Botswana National Parks

<p>Overseas Development Institute (ODI)</p>	<ul style="list-style-type: none"> ▪ <i>'Guidelines for Investment in Sustainable Renewable Natural Resources Management'</i> research funded by DFID ▪ <i>'Rethinking Natural Resource Degradation in Sub-Saharan Africa: Implications for Policy'</i> research funded by DFID ▪ UK submission on <i>'Bushmeat as a Trade and Wildlife Management Issue'</i> by David Brown and Nigel Hunter, for DEFRA and DFID 'Bushmeat: A Pilot Study. Report to DEFRA including feasibility and prioritization of the current and further-required research activities and potential solutions' with FFI, for DEFRA with some travel funded by DFID ▪ Evaluations e.g. of Korup Project in Cameroon in 1996, plus several reviews of Mt. Cameroon Project ▪ <i>'Sustainable Tourism and Poverty Elimination'</i> Study by IIED, ODI and Deloitte and Touche, 1999 ▪ <i>Pro-poor Tourism Strategies: Expanding opportunities for the poor</i> by ODI, IIED and ICRT, 2001 ▪ <i>The Tourism Industry and Poverty Reduction: A Business Primer</i> by ODI, IIED and ICRT, 2002 ▪ <i>Rethinking Wildlife for Livelihoods and Diversification in Rural Tanzania: A Case Study from Northern Selous</i>, by ODI, Sokoine University of Agriculture and University of East Anglia, case study for LADDER Project, 2002 ▪ <i>Transforming Roles but not Reality? Private Sector and Community Involvement in Tourism and Forestry Development on the Wild Coast, South Africa</i>, by ODI and PLAAS, for SLAS, 2002 ▪ <i>Transformation Or Tinkering? New Forms Of Engagement Between Communities And The Private Sector In Tourism And Forestry In Southern Africa</i>, by ODI and IDS, for SLSA, 2002 ▪ Forthcoming: new set of Working Papers on Pro-Poor Tourism, by ODI, IIED and ICRT
<p>IUCN</p>	<ul style="list-style-type: none"> ▪ EC/DFID funded <i>Biodiversity in Development Project</i>, completed 2001. Three main publications: Strategic Approach to Biodiversity and Development; Biodiversity Briefings; Guiding Principles

Table A3: Dimensions of Wildlife <-> Poverty linkages

Positive Wildlife-Poverty Linkages:	Livelihood Outcomes	Possible Negative Linkages
<p>Key source of food</p> <ul style="list-style-type: none"> ▪ Bushmeat ▪ Honey and other wild products <p>Some wildlife species of particularly high dietary value (lizards, birds)</p>	Reduced Hunger	<ul style="list-style-type: none"> • Human-wildlife conflict is a serious concern e.g. crop damage, livestock loss, disease transmission, though not found to be high in case studies
<p>Core to coping strategies</p> <ul style="list-style-type: none"> ▪ Drought and lean season food ▪ Improved security in tourist areas 	Reduced vulnerability	<ul style="list-style-type: none"> • In times of drought wildlife may compete with livestock for fodder, water, though not identified as a problem in case studies
<p>Basis of employment, diversification and income opportunities</p> <ul style="list-style-type: none"> ▪ Complementary to livestock, other livelihood strategies ▪ Tourism ▪ Hunting ▪ Related industries (travel, crafts, accommodation, food, laundry) ▪ Trade in linked products (honey, other wild products) <p>Source of long-term comparative advantage</p> <ul style="list-style-type: none"> ▪ Sustainable livelihood opportunities for many poor people 	Improved income	<ul style="list-style-type: none"> • Land use: opportunity cost of land may be high e.g. where crop farming is possible (Mbomipa, Kunene, Madikwe all semi-arid, with wildlife considered most economic land use; not known for other case studies) • Protected areas: distribution of costs and benefits of wildlife conservation tilted against the poor (Mbomipa, Amoro and Cameroon all in/close to National Parks, but cost distribution analysis not available)
<p>Contributes indirectly to delivery of local environmental services:</p> <ul style="list-style-type: none"> ▪ Soil quality ▪ Water ▪ Air ▪ Hydrological function (flood protection) <p>Perceived as a 'global public good' which in turn supports conservation investment</p> <ul style="list-style-type: none"> ▪ Biodiversity ▪ Global climate ▪ Existence value 	Environmental sustainability	<ul style="list-style-type: none"> • Poor bear unfair proportion of costs of providing both local services and global public goods elements • Over harvesting of wildlife for commercial and personal use

Use for meat, medicines and rituals is part of cultural values for many ethnic groups	Improved well-being	
Empowerment and improved local governance through community wildlife management		

Table A4: The Six Case Studies – Key Parameters

Case Study	Project Type	Brief Description of Relevant Activities	Total Funding	Scale and Strength of Wildlife-Poverty Linkages
Mbomipa, Tanzania*	Bilateral, Technical Contract	Aims to enable 40,000 poor people in 19 villages close to Ruaha National Park to derive livelihoods from wildlife hunting on communal land and natural resources broadly	£1.92 million 1997-2002	<ul style="list-style-type: none"> Hunting quota auction generates >2/3 communal village income Strong empowerment and governance impact CBWM is high transaction cost, especially community institutional capacity building Policy environment constraint (WMA guidelines delayed)
Kunene, Namibia*	Joint Funding Scheme, through WWF	Through wildlife enterprise and rural development, aims to improve livelihoods of 70,000 poor people	£0.35 million 1997-2002	<ul style="list-style-type: none"> Tourism in communal areas growing fast and generating jobs, income and multipliers for local growth Still low % of value added to poor compared with private sector Tourism income very vulnerable to conflict e.g. Caprivi
Amboro, Bolivia	Through CARE, UK	Aims to create income earning opportunities for 25,000 poor people living in buffer zone of Amboro National Park	£3.12 million 1996-2000	<ul style="list-style-type: none"> Complex linkages where protected areas involved, can lead to conflict Diverse set of wildlife-linked enterprises based on broad array of linkages, emphasising connection of poor to markets
Madikwe, South Africa	Bilateral, Technical Contract	Aims to bring benefits of newly created Madikwe Game Reserve to several thousand poor people	£0.95 million 1997-2001	<ul style="list-style-type: none"> Weak rights invested in local communities lead to weak bargaining power Employment is highest valued output from linkages
Mt. Came-roon Project	Bilateral	Sustainable forest management project, with sub-component aiming to enable local communities to benefit from sustainable bushmeat	£10.6 million 1991-2002	<ul style="list-style-type: none"> Bushmeat an important source of food and livelihoods for poor people Sustainable forest management is key to sustainable bushmeat supply Bushmeat harvesting is complementary to other livelihood strategies
Northern Areas, Pakistan	JFS, through WWF	Sustainable resource use project aiming to improve livelihoods of 17,000 poor people in 26 villages, with eco-tourism and tourist hunting sub-components	£0.41 million 1999-2004	<ul style="list-style-type: none"> Linkages constrained by lack of hunting guidelines and regulations Takes long-term effort to turn linkages into new diverse sources of livelihoods

* These two case studies were the primary focus, with fieldwork conducted in country. Brief 'mini' case studies were conducted for the other four projects based on available reports and interviews with project staff.

Table A5: Review of Main Findings from the Six Case Studies, Using the Sustainable Livelihoods Approach

Element of Livelihoods Framework	Wildlife Case Study Impacts ⁵
Impact on human capital	<ul style="list-style-type: none"> ▪ Wildlife/natural resource management committees established, with training in planning, finance, enterprise, joint venture negotiation (Mb, K, A, C, P) ▪ Community game guards hired and trained in monitoring, guiding and/or reducing human/wildlife conflict (Mb, K, C, P) ▪ Tourist lodge employees, porters and guides trained in eco-tourism skills (K, Ma, A, P) ▪ Craft-makers trained in wild resources product development and marketing (K, P, A) ▪ Environmental education provided for teachers, youth, children (Mb, K, Ma, A, C, P) ▪ Meat for household nutrition (C, Mb, K)
Impact on financial capital	<ul style="list-style-type: none"> ▪ Collective income from trophy hunting is quickly realised and can be substantial (Mb, K) ▪ Joint venture tourism operations, often long-term process, but can be lucrative in terms of levies, jobs (K, Ma) ▪ Community campsites, though offer lower income (K) ▪ Services to lodges – laundry, sale of thatch, vegetables etc. (K, Mb) ▪ Spin off businesses – cultural villages, tyre repair, kiosks etc (K, Mb) ▪ Savings on village levies (Mb) ▪ Improved access to other funding sources (Ma, K)
Impact on natural capital	<ul style="list-style-type: none"> ▪ Increasing/viable wildlife populations (Mb, K, Ma, P, but probably not C) ▪ Going beyond wildlife – water, livestock, forestry, fire prevention (e.g. integrated conservancy management plans, K, P, Mb) ▪ But some lost access to grazing where tourism has exclusive use (K)
Impact on physical capital	<ul style="list-style-type: none"> ▪ Conservancy office and radios (K, P) ▪ Water point protection from elephant damage (K) ▪ Electric fencing for crop protection (K) ▪ New schools and clinics (Mb) ▪ Improved road (Mb) ▪ Irrigation system (Mb) ▪ Community business and cultural center (Ma) ▪ Improved water and sanitation systems (P)

⁵ Mb=Mbomipa, K=Kunene, C=Cameroon, A=Amboro, Ma=Madikwe, P=Pakistan

Impact on social capital	<ul style="list-style-type: none"> ▪ Creation/strengthening of community NRM institutions (Mb, K, A, C, Ma, P) ▪ Enhance cooperation between neighbouring communities (K, Mb, C) ▪ Promotion of cultural heritage (K, Ma, C) ▪ Exchange visits between communities locally and internationally (K) ▪ But some conflicts – can exacerbate unresolved leadership issues, competition between groups for benefits, individuals wanting personal gain (K, Mb, Ma, C)
Impact on livelihood strategies	<ul style="list-style-type: none"> ▪ Livelihood diversification into tourism, natural resource enterprises and spin-off businesses (K, Mb, Ma, A) ▪ But some negative impacts, e.g. increased human-wildlife conflict (K, Mb) ▪ Mitigation strategies – water point protection, electric fencing, guards (K, Mb)
Differences between stakeholders	<ul style="list-style-type: none"> ▪ Gender: women gain access to decision making roles and employment (K, Mb) ▪ Ethnicity: immigrant pastoralists feel excluded from decision-making (Mb) ▪ Location: benefits from lodge development (e.g. supplying laundry, food, car park) greatest for those experiencing greatest costs (predators, loss of land) in K
Impact on policies, institutions and processes	<ul style="list-style-type: none"> ▪ Development of new community-level institutions with stronger participation and empowerment (Mb, K, C) ▪ Active implementation of and contribution to government policy, planning and legislation (Mb, K, C, P) ▪ Support to decentralization processes through capacity building of district level government (Mb, A, P) ▪ Promotion of community-based and participatory ways of working in government (K, Ma, Mb, A) ▪ Improved co-ordination between communities, traditional authorities, NGOs, private sector, and government (Mb, K, Ma, A, C, P)
Impact on livelihood outcomes	<ul style="list-style-type: none"> ▪ Community empowerment – mobilising for additional resources (Ma), holding service providers accountable (K) ▪ Increased equity in distribution of benefits (Mb, C) ▪ Increased self-reliance at village level (Mb, K) ▪ Increased confidence in dealing with outsiders (K, Mb) ▪ More sustainable use of natural resource base

Table A6: Estimated Number of Poor Living in Marginal Arid/Semi-Arid Areas

	Total Number of Poor on <\$1/day (millions)	Number Living in Arid/Semi-Arid Areas	% Living in Arid/Semi-Arid Areas
East Asia	244	3	1%
Latin America and Caribbean	62	10	16%
Newly Independent States	9	2	18%
South Asia	543	130	24%
South East Asia	99	0	0%
Sub-Saharan Africa	293	101	35%
North Africa/M.East	10	3	31%
TOTAL	1,261 million	246 million	23%

Source: adapted from Thornton et al 2001

Table A7: Aggregate Indicators of Wildlife-Poverty Linkages for Developing Countries

Full Table column headings:

1. Country
2. Total Population 2001
3. GNI per capita US\$ 2001
4. Number living on <\$1/day
5. Number living on <\$1/day in arid & semi-arid areas
6. Tourism receipts 1995-7 in \$ millions
7. Forest area as % total land area
8. Protected areas as % total land area
9. Endemic mammal species (top 50 countries only)

1) Country	2) Total Population 2001	3) GNI per capita US\$ 2001	4) Number living on <\$1/day	5) Number living on <\$1/day in arid & semi-arid areas	6) Tourism receipts 1995-7 in \$ millions	7) Forest area as % total land area	8) Protected areas as % total land area	9) Endemic mammal species (top 50 countries only)
Afghanistan	27,247,940	X	591,691	329,434	1	2%	0.3	-
Algeria	30,893,800	1,630	621,002	166,638	24	1%	2.5	-
Angola	13,512,450	500	5,958,566	973,921	9	56%	6.6	4
Argentina	37,478,250	6,960	4,740,783	617,848	4694	12%	1.8	47
Armenia	3,809,225	560	975,263	80,246	8	12%	7.6	-
Azerbaijan	8,114,301	650	2,115,564	267,423	154	13%	5.5	-
Bangladesh	133,405,400	370	36,649,619	0	330	9%	0.7	-
Belize	247,107	2,910	30,356	0	85	59%	20.9	-
Benin	6,436,657	360	2,844,313	160,439	28	24%	6.9	-
Bhutan	828,044	640	448,040	447	6	64%	21.2	-
Bolivia	8,515,772	940	1,015,227	38,766	162	48%	14.2	7
Botswana	1,615,210	3,630	620,645	608,695	174	21%	18.0	-
Brazil	172,564,000	3,060	8,497,981	848,815	2389	62%	4.4	68
Burkina Faso	11,552,570	210	7,361,865	6,690,404	32	26%	10.4	-
Burundi	6,938,011	100	3,256,146	0	1	3%	5.3	-
Cambodia	12,266,470	270	X	X	121	52%	15.8	10
Cameroon	15,197,720	570	7,119,892	1,439,510	38	50%	4.4	-
Central African Rep.	3,770,885	270	2,405,736	48,558	5	37%	8.2	-
Chad	7,916,727	200	3,400,007	2,986,197	10	10%	9.0	-
Chile	15,396,610	4,350	652,589	59,311	962	21%	18.7	11
China	1,271,900,000	890	236,286,034	2,661,365	10336	17%	6.2	62
Colombia	43,035,480	1,910	4,740,594	39,796	908	44%	8.2	22
Congo, Dem. Rep.	52,359,770	X	24,253,288	0	5	58%	4.5	25
Congo, Rep.	3,103,768	700	1,387,327	563,050	4	65%	4.3	-
Costa Rica	3,886,318	3,950	348,256	0	700	39%	14.2	8
Cote d'Ivoire	16,409,950	630	1,897,036	0	78	22%	6.2	-
Cuba	11,221,720	X	1,391,545	0	1182	21%	17.2	15
Dominican Republic	8,505,204	2,230	286,585	0	1841	28%	31.3	-
Ecuador	12,879,520	1,240	2,473,710	525,915	275	37%	42.6	21
Egypt, Arab Rep.	65,172,580	1,530	2,119,231	115,200	3245	0%	0.8	4
El Salvador	6,399,470	2,050	1,609,622	0	51	6%	0.2	-
Equatorial Guinea	469,088	700	205,862	0	2	62%	0.0	-

Eritrea	4,204,024	190	X	X	67	13%	4.3	
Ethiopia	65,816,060	100	20,481,636	3,170,346	30	4%	5.0	26
Gabon	1,260,794	3,160	432,442	0	7	82%	2.7	3
Gambia, The	1,341,071	330	469,635	246,426	22	43%	2.0	-
Georgia	5,019,033	620	1,353,945	28,558	X	43%	2.8	-
Ghana	19,707,870	290	9,183,800	700,565	249	27%	4.6	-
Guatemala	11,689,110	1,670	5,119,986	0	295	26%	16.8	4
Guinea	7,579,660	400	3,584,198	112,331	4	28%	0.7	-
Guinea-Bissau	1,225,624	160	X	X	X	61%	0.0	-
Guyana	766,256	840	111,147	0	41	79%	0.3	-
Haiti	8,114,161	480	953,278	0	81	3%	0.3	-
Honduras	6,575,264	900	2,339,748	0	105	48%	6.0	-
India	1,033,390,000	460	446,029,654	116,658,279	2908	20%	4.4	38
Indonesia	213,637,600	680	31,605,486	86,054	5968	55%	10.1	165
Iran, Islamic Rep.	64,657,580	1,750	1,758,681	882,954	227	4%	5.1	4
Iraq	23,750,180	X	601,121	145,710	13	2%	<0.1	-
Jamaica	2,668,230	2,720	79,062	0	1097	30%	0.1	3
Jordan	5,030,925	1,750	98,326	45,818	721	1%	3.3	-
Kazakhstan	14,825,530	1,360	243,285	4,444	X	4%	2.7	-
Kenya	30,735,760	340	7,936,045	1,508,894	440	29%	6.0	10
Korea, Dem. Rep.	22,384,230	X	6,490,668	0	X	68%	2.6	-
Kyrgyz Republic	4,967,267	280	1,291,227	231,044	4	5%	3.5	-
Lao PDR	5,403,167	310	1,502,363	24,878	52	53%	X	-
Lebanon	4,384,744	4,010	83,130	9,342	X	3%	0.5	-
Lesotho	2,061,728	550	1,005,372	31,870	19	0%	0.2	-
Liberia	3,216,189	X	1,488,039	0	X	31%	1.2	-
Libya	5,410,297	X	161,003	85,289	6	0%	0.1	4
Madagascar	15,975,750	260	10,210,400	3,345,878	64	20%	1.9	67
Malawi	10,526,180	170	5,147,704	3,577,926	7	22%	8.9	-
Malaysia	23,795,590	3,640	5,983,418	0	3895	58%	4.6	14
Mali	11,094,340	210	9,041,404	8,065,925	19	11%	3.7	-
Mauritania	2,750,061	350	95,373	20,386	11	n.a.	1.7	-
Mexico	99,415,100	5,540	17,622,466	4,101,900	6902	n.a.	3.4	136
Mongolia	2,422,054	400	359,817	12	21	n.a.	11.5	6
Morocco	29,173,130	1,180	570,444	191,317	1248	7%	0.7	5
Mozambique	18,071,160	210	7,282,417	3,483,805	X	38%	6.0	-
Myanmar	48,314,640	X	12,476,346	0	34	51%	0.3	8
Namibia	1,792,060	1,960	615,827	570,033	214	10%	12.9	-
Nepal	23,584,710	250	9,109,797	892,498	118	26%	7.6	-
Nicaragua	5,201,641	X	734,152	0	61	25%	7.0	-
Niger	11,192,240	170	6,581,347	6,215,145	17	1%	7.7	-
Nigeria	129,880,700	290	88,244,233	29,284,282	75	15%	3.3	-
Pakistan	141,450,200	420	48,635,142	12,351,327	126	3%	4.7	-
Panama	2,900,589	3,290	307,303	0	342	38%	18.8	11
Papua New Guinea	5,254,053	580	1,278,811	0	67	66%	<0.1	49
Paraguay	5,635,806	1,300	1,024,888	12,517	874	57%	3.4	-
Peru	26,087,990	2,000	3,919,396	520,025	581	51%	2.7	46
Philippines	77,015,490	1,050	20,155,408	0	2662	19%	4.8	90
Rwanda	8,705,841	220	2,748,345	0	1	12%	13.8	-
Senegal	9,769,448	480	1,945,015	1,699,206	147	13789%	11.1	-
Sierra Leone	5,140,976	140	2,769,922	0	9	n.a.	1.1	-
South Africa	43,240,000	2,900	2,050,160	5,330,296	1962	7%	5.4	27
Somalia	9,088,572	X	5,377,902	5,025,271	X	12%	4.7	8

Sri Lanka	19,649,490	830	1,223,942	48,583	203	30%	13.3	12
Sudan	31,687,240	330	13,895,266	7,880,276	8	25%	3.4	7
Suriname	419,656	1,690	21,517	0	18	86%	4.5	-
Syrian Arab Republic	16,593,210	1,000	421,089	159,239	1265	3%	0.0	-
Tajikistan	6,223,721	170	1,711,559	826,042	X	3%	4.1	-
Tanzania	34,450,420	270	6,621,867	1,394,107	313	41%	14.6	12
Thailand	61,238,240	1,970	1,217,189	2,751	8343	29%	13.8	5
Togo	4,653,458	270	2,195,837	196,902	13	9%	7.6	-
Trinidad and Tobago	1,309,608	5,540	164,269	0	96	50%	6.0	-
Tunisia	9,674,605	2,070	191,527	59,461	1464	3%	0.3	-
Turkey	66,230,330	2,540	1,576,645	455,390	5973	13%	1.3	-
Turkmenistan	5,293,247	950	933,756	107,946	7	8%	4.1	-
Uganda	22,791,040	280	8,223,842	125	94	17%	7.9	4
Uruguay	3,359,144	5,670	59,042	0	696	7%	0.3	-
Uzbekistan	25,100,010	550	127,062	665,516	X	4%	1.8	-
Venezuela, RB	24,632,380	4,760	3,554,452	267,516	640	54%	35.4	11
Vietnam	79,526,050	410	21,280,198	190,212	87	30%	3.0	5
Yemen, Rep.	17,989,950	460	910,082	624,839	48	1%	0.0	-
Zambia	10,282,500	320	6,570,260	5,445,875	57	42%	8.5	3
Zimbabwe	12,820,650	480	4,414,817	3,363,453	208	49%	7.9	-
a) see below	b) Source: World Bank Data Query	c) Source: World Bank Data Query	d) Source: Thornton et al	e) Source: Thornton et al	f) see below	g) see below	h) see below	i) see below

Column Sources from final table row:

- a. * = 2000 data; X = no data; - = not among 50 most species-rich countries
- b. Source: World Bank Data Query
- c. Source: World Bank Data Query
- d. Source: Thornton et al
- e. Source: Thornton et al
- f. Source WRI Table EI.2 International Financial Flows and Investment
- g. Source: World Bank Data Query
- h. Source WRI Table BI.1 National and International Protected Areas, based on WCMC 1999
- i. WCMC 1994, Wells & Brandon 1992

Table A8: Estimated Bushmeat Consumption in Equatorial Africa

Country	Number people on <\$1/day ⁶	Forest Area	Bushmeat Population ⁷ Eating		Bushmeat eaten ²		
		km ²	Forest	Urban	Tonnes/year	kg/km ² /yr	kg/p.c/p.a.*
Cameroon	7,119,892	155,330	1,424,000	2,214,620	78,077	503	21
CAR	2,405,736	52,236	219,500	539,775	12,976	248	17
Dem.Rep. Congo	n.a.	1,190,737	22,127,000	3,782,369	1,067,873	897	41
Equatorial Guinea	205,862	17,004	183,000	227,500	9,762	574	24
Gabon	432,442	227,500	181,700	581,440	11,380	50	15
Rep.Congo	1,387,327	213,400	219,500	1,245,528	16,325	77	11
Total:		1,856,207	24,354,700	8,591,232	1,196,395	645	35

* This column assumes that all the bushmeat produced in each country is consumed within it.

⁶ From Thornton et al 2001

⁷ From Wilkie and Carpenter 1999b

Table A9: Illustrative Examples of Wildlife-Based Interventions for Poverty Reduction

Theme	Examples
Community-based wildlife management	<p>Community based wildlife management has been applied in many developing countries, often championed by conservation NGOs, and with very mixed results. National frameworks for CBWM best developed in Africa, hence many fewer examples from outside Africa. Some examples include:</p> <ul style="list-style-type: none"> • Tanzania: national Wildlife Management Area (WMA) program to promote community wildlife management; draft regulations in process of review; two key pilot projects are DFID-funded Mbomipa project with 19 villages close to Ruaha National Park, and GTZ-funded pilot project through Jukumu community association with 40 villages adjacent to the Selous Conservation Area. Many other WMAs in varying stages of development, notably around northern tourism circuit of Serengeti, Ngorongoro, Lake Manyara, Kilimanjaro. • Namibia: national community wildlife Conservancy program; 20 or so Conservancies now registered with another 40 anticipated, with high concentration in northern Kunene and Caprivi areas. Many community-owned and private sector joint venture tourism businesses established in Conservancies. NACOBTA, a Namibian NGO, supports development and marketing of community tourism businesses in Conservancies. WILD project (DFID) at national level working with ministries to help ensure livelihood and poverty impact of Conservancies monitored and increased. • Zimbabwe: national sustainable use of wildlife program – CAMPFIRE, enabling communities to sell hunting quotas and tourism. Current insecurity means initiative on hold, and threatened by rapidly declining wildlife numbers. • Zambia: national community wildlife management program in place; ADMADE and LIRDPA enable communities to acquire use rights for wildlife management for both hunting and tourism. • South Africa: national program of land restitution is giving some communities opportunities to participate in wildlife management areas e.g. Makuleke; Spatial Development Initiative and Community-Public-Private Partnership Programmes create opportunities for PPT; transfrontier concession areas being developed on borders with Mozambique, Swaziland and Zimbabwe • Mozambique: several initiatives in the pipeline, dependent on development of legislative framework for community wildlife management, • Kenya: community owned group ranches in wildlife-rich areas have linked together in local landowner associations to promote wildlife tourism and to review the pilot wildlife cropping schemes. <p><u>From Roe and Jack 2001</u></p> <ul style="list-style-type: none"> • Costa Rica: legal harvesting of marine turtle eggs • Indonesia and Bangladesh: efforts to involve communities in sustainable turtle harvesting • Nicaragua: management of green iguanas for the pet trade • Peru: community management of wild vicunas, with trade in fleeces • Brazil: Mamiraua reserve, community management of wildlife and fish resources • Pakistan: sustainable hunting of ibex <p><u>Three sectoral reviews:</u></p> <ul style="list-style-type: none"> • ESRC-funded Community Conservation Research Project (a collaboration between the University of Manchester, AWF, CASS in Zimbabwe and

	<p>University of Cambridge, see Hulme and Murphree 2001) review of experience in Africa</p> <ul style="list-style-type: none"> • IIED's Evaluating Eden Project assessed community-based conservation initiatives in Latin America, Africa and Asia (IIED 1994, Fabricius et al 2001, Roe et al, 2000) • Biodiversity Conservation Network (BCN) – a collaborative initiative involving WWF-US, the Nature Conservancy and the World Resources Institute, with funding from USAID; last year completed a seven-year Biodiversity Support Program (BSP) supporting community wildlife enterprises in seven countries in Asia and the Pacific.
Pro poor wildlife tourism	<ul style="list-style-type: none"> • Pro Poor Tourism initiative, jointly between ODI, IIED and Centre for Responsible Tourism at Greenwich, including reviews of impact of tourism on the poor in Namibia and Asia, though no explicit focus on wildlife tourism. Series of case studies includes Ecuador, South Africa, Namibia, Nepal • Community-owned and community-private sector joint venture tourism businesses: well documented examples include: Il Ngwesi (Kenya); Wilderness Safaris lodges in KwaZulu Natal, Namibia; Serena Hotels in Kenya, Tanzania; Conservation Corporation facilities in South Africa, Tanzania, Kenya • World Tourism Organisation has conducted a review of 104 tourism ecolabels, awards and self-commitments in preparation for WSSD
Sustainable bushmeat management	<ul style="list-style-type: none"> • Cameroon: in Mt Cameroon area, formation of Mokoko Wildlife Management Association and three West Coast Wildlife Management Committees in 1997, with sub-committees for monitoring, bushmeat and timber, to facilitate broad movement to community management of forest resources • Community forest management programs that include wildlife: Nepal, Indonesia, China <p><u>Cited in Bowen-Jones et al</u></p> <ul style="list-style-type: none"> • Cameroon: sustainable duiker harvesting • Central African Republic, Gabon: ECOFAC project - land use zoning and source-sink approaches to bushmeat management • Peru: in northeast areas, matching management responses to socio-economic needs and species responses • Captive breeding schemes: for grasscutters in Nigeria, plus experiments with blue duiker, Gambian pouched rat, paca (in Panama)
Pro poor conservation	<ul style="list-style-type: none"> • Community based conservation initiatives by many conservation NGOs, generally praised as a big improvement on 'park outreach' (handout) schemes, but generally conservation is still the main priority; not good at poverty assessment or monitoring • Integrated conservation and development projects throughout the 1980s and 1990s, many World Bank funded, and in many developing countries including Indonesia, China • WWF-UK agreement with DFID: helping to support WWF's strategy to integrate poverty issues into its conservation work

Table A10: DFID Tourism Challenge Fund – Pro poor Tourism Projects Funded to Date

Project Name	Countries	Total Budget	Timing
ROUND 1			
NACOBTA: multi-site marketing for community wildlife tourism businesses	Namibia	£120,000	2000-2003 (now delayed by a year)
University of Greenwich Centre for Responsible Tourism	Gambia	£102,105	2000-2002 (completed)
Bintan Resort Corporation: community based ecotourism planning	Indonesia	£294,000	2000-2003
ROUND 2			
CARE Int'l with several local private sector operators: Historic and Cultural Tourism along the Che Guevara Trail	Bolivia	£179,124	2001-2004
African Wildlife Foundation with Wilderness Safaris and Serena Hotels: building successful tourism joint ventures	Tanzania, South Africa and Mozambique	£309,781	2001-2004 (started late, just submitted first 1/4ly report)
Twin Tribes Travel Ltd with Cafedirect Ltd and three local partners: Travelling Fair: developing and marketing tourism ventures with southern communities	Tanzania and Peru	£205,700	2001-2004
Asociacion Alianza Verde: responsible tourism and the Maya heritage, with CI and ProPeten (NGO and private sector)	Guatemala	£150,080	2001-2004
Prince of Wales International Business Leaders Forum, training poor young people for jobs in tourism	Thailand	£285,000	2001-2004
ROUND 3			
Mboza Tourism Projects, ODI and private sector partners: Pro poor tourism in southern Africa	Southern Africa, including 6 pilot sites	~£280,000	2002-2005
IUCN: Fair Trade in Tourism	South Africa	£300,000	2002-2005
Centre for Travel and Tourism Studies: tourism-related skills for demobilised soldiers, Cambodia	Cambodia	£268,168	2002-2005
CI & Okavango Wilderness Safaris 'Bushman Traditional Village'	Botswana	£158,540	Contract not yet signed
Volcanoes Safaris, gorilla tourism project	Rwanda	£?	In process

Table A11: Some Large Conservation NGOs

Organis- ation	Areas of Operation	Main activities	Revenue for 2001	Approach to livelihoods of the poor
The Nature Conservancy (U.S.)	North America Central America South America Caribbean Asia-Pacific Influence over 80 million hectares worldwide	<ul style="list-style-type: none"> • Negotiating agreements to manage areas through partnerships/using conservation easements • Influencing partner organisations/government agencies managing land • Educating people living in ecologically sensitive areas • Influencing resource based industries • Working with government agencies 	<p>\$547 million income in 2001 (\$787 million in 2002)</p> <p>\$1.6 billion of land held, mostly in North America</p> <p>\$241 million of reserves for land acquisition</p> <p>Largely privately financed</p>	<p>Socio-economic issues hardly touch on in site planning methodologies, though recognize this as weakness</p> <p>Few references to poverty/poor people on website. [www.nature.org]</p>
WWF-US	n.a.	<ul style="list-style-type: none"> • Preservation of important habitats • Species protection • Mitigating global threats • Combining conservation with social and economic development 	<p>\$120 million income in 2001</p> <p>1.2 million members in the US</p>	<p>Hard to find references to poverty/poor people on website (www.worldwildlife.org)</p>
Conservation International (U.S.)	Works in 30 countries on 4 Continents 0.54 million acres of concessions in Peru and Guyana	<ul style="list-style-type: none"> • Supporting protected area creation and management • Securing land using conservation concessions • Supporting the livelihoods of people who depend on important ecosystems for their livelihoods 	<p>\$60 million in 2001</p> <p>Run 2 IFC-GEF funds: Conservation Enterprise Fund and \$150 million Critical Ecosystems Preservation Fund</p>	<p>Enterprise programme works closely with poor communities [www.conservation.org]</p>
WWF-UK	Principal countries: Bhutan, Brazil, Columbia, India, Mexico, Namibia, Nepal, Nigeria, Pakistan,	<p>Main programmes:</p> <ul style="list-style-type: none"> • Species conservation • Forests • Climate change • Countryside • Living seas • Freshwater • Toxics • Education 	<p>Income of £28 million in 2001</p> <p>287,000 supporters in the UK</p> <p>70% income from private sources</p>	<p>Statement about need to tackle poverty on front pages of annual report</p> <p>'People and the Planet' one of two major campaigns in 2001</p>

	Pacific, Tanzania, Thailand			Developing own livelihoods assessment capacity
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Table A12: Review of Incorporation of Wildlife Resource Issues in PRSPs and DFID-CSPs for Fourteen Countries

Country by Country Review of Wildlife-Poverty Linkages in PRSPs/CSPs ⁸							
Country	For each country, emphasis given to:						
	Wildlife-Poverty Links	CBNRM	Wildlife Tourism	Bushmeat	Conservation and Poverty (eg Protected Areas)	Rural Development Strategy	Forest Management Strategy
BOLIVIA							
PRSP 2001	Very high	Medium	Low	High	High	High	High
DFID-CSP 1998	No mention	Low	No mention	No mention	High	Medium	Very low
BRAZIL							
PRSP	N/A	--	--	--	--	--	--
DFID-CSP 1998	No mention	Medium	No mention	No mention	High	Medium	Low
CAMEROON							
IPRSP 2000	No mention	Medium	Low (general eco-tourism rather than wildlife)	No mention	High	Medium (focus on forestry based livelihoods)	High
DFID-CSP 2002	Low (more widely forest-focused)	Medium	No mention	No mention	High	Medium (focus on forestry based livelihoods)	High
GHANA							
PRSP 2001	Medium	Medium	No mention	No mention	No mention	Medium	Low
DFID-CSP 1998	No mention	Medium	No mention	No mention	No mention	Low	Low
GUYANA							
PRSP 2001	Low (forest products/eco-tourism)	Medium	High (general eco-tourism rather than wildlife)	Low	High	High	Low
DFID-CSP	No mention	Medium	No	No	No mention	Low	High

⁸ Very high: issue thoroughly explored, further action suggested as part of national strategy
High: issue explored, some related action points mentioned or alluded to
Medium: issue explored briefly, no related action points suggested
Low: issue cursorily explored
Very low: issue mentioned fleetingly

1998			mention	mention			
INDIA							
PRSP	N/A	--	--	--	--	--	--
DFID-CSP 1999	No mention	No mention	No mention	No mention	No mention	No mention	Low
INDONESIA							
PRSP	N/A	--	--	--	--	--	--
DFID-CSP 2000	Low (more widely forest-focused)	Medium	No mention	No mention	No mention	Medium	High
KENYA							
I-PRSP 2000	Medium	Medium	High		Low	High	Low
DFID-CSP 1998	Low	Low	No mention	No mention	High	Medium	Very low
MALAWI							
I-PRSP 2000	Medium	Medium	Medium	No mention	High	Medium	Medium
DFID-CSP 1998	No mention	Medium	No mention	No mention	Medium	Low	Very low
NEPAL							
PRSP	N/A	--	--	--	--	--	--
DFID-CSP 1998	Low (more widely forest-focused)	High	No mention	No mention	No mention	High	High
NIGERIA							
PRSP report 2001	Medium	Low	No mention	Medium	Low	Low	Low
DFID-CSP 2000	No mention	Medium	No mention	No mention	No mention	High	High
S-AFRICA							
PRSP	N/A	--	--	--	--	--	--
DFID-CSP 1998	No mention	High	Medium	No mention	No mention	High	Low
TANZANIA							
PRSP 2000	Low	No mention	No mention	No mention	No mention	Low	No mention
DFID-CSP 1999	Low	Medium	Medium	No mention	High	Medium	No mention
UGANDA							
PRSP 2000	No mention	Low	No mention	No mention	No mention	High	Very low
DFID-CSP 1999	Very low	Low	No mention	No mention	No mention	High	Very low

Annex 2: Wildlife and Poverty Study- Bibliography

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