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conservation

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Managing the bushmeat trade in Ghana

Bushmeat is important for household food security and income generation in many parts of Africa. However, high levels of bushmeat extraction can cause the extinction of threatened species, making bushmeat an unsustainable natural resource. Is it possible to manage the bushmeat trade whilst protecting threatened species?

Bushmeat is the meat of wild animals, usually from forests. It is an important food source in both rural and urban areas. The sale of bushmeat also provides valuable income for rural households living in extreme poverty. However, over-exploitation can lead to the local extinction of threatened species. If too many species become threatened or extinct, bushmeat is unable to provide a sustainable source of income and food security for rural households.

Trade does not have to be unsustainable. Research from the Institute of Zoology (Zoological Society of London), UK, suggests that the bushmeat trade in Sekondi-Takoradi, western Ghana, is presently sustainable. Research findings include:

- The bushmeat trade is largely unregulated by state or local institutions. Local regulations are rarely enforced and trade appears to be a free market with no restrictions on sale or purchase between traders.
- There are five main groups in the bushmeat commodity chain: farmer hunters, commercial hunters, wholesalers, market traders and 'chopbar' (cafe) operators. Bushmeat is primarily traded from commercial hunters via wholesalers to chopbars and no one group has overall control of trade in this region.
- Urban chopbars sell the most bushmeat to the public, but rural hunters appear to make the most profit, indicating that the bushmeat trade is an important component of the rural economy.
- Species with high reproductive rates (robust species) that can survive in the varied agricultural mosaic landscapes in Sekondi-Takoradi (known as 'farmbush') supply the bushmeat trade. These species can cope with high levels of exploitation and make the trade sustainable.

Whilst the bushmeat trade is currently sustainable, it has nevertheless had a catastrophic impact on local wildlife populations. Vulnerable species with low reproductive rates appear to have become locally extinct because they could not cope with heavy exploitation in the past.

As long as only robust species are hunted, and vulnerable species are protected, the bushmeat trade is sustainable. However, effective management will be necessary to achieve and maintain this. The findings of this research provide several guidelines for bushmeat management policies:

- Initiatives that permit the sustainable hunting of robust species, but also protect vulnerable species, will allow communities to continue benefiting from the bushmeat trade whilst protecting biodiversity and its associated ecosystem services.
- Agricultural 'farmbush' landscapes have the potential to provide a significant and sustainable supply of bushmeat. These areas may be important components of bushmeat management policies.
- Management attention should focus primarily on those markets where vulnerable species (slow reproducers) are still being traded, since these species are likely to face rapid local extinction in the absence of effective regulation.
- Management interventions in the bushmeat commodity chain will be most effective when all interest groups are involved. This approach is most important when no single group controls the market, but it will be beneficial in all market conditions.
- All regulatory frameworks developed for the sustainable management of the bushmeat trade must be supported by effective law enforcement.

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www.id21.org

Environmental management and the MDGs

The Millennium Development Goal (MDG) 7 challenges policymakers to 'ensure environmental sustainability'. Poverty and the environment are closely linked: natural resources provide food, shelter and resources from which people can generate income.

The Poverty-Environment Partnership argues that ecosystems and natural resources are critical sources of wealth that can help poor people escape from poverty. However, countries need support to strengthen their ability to monitor and assess how environmental management contributes to poverty reduction.

Providing policymakers with the information they need to make effective decisions about environmental management is vital. Insufficient commitment towards ensuring environmental sustainability affects other MDGs, especially those relating to health, gender and governance.

The research shows:

- The information process – collecting, processing, analysing and reporting – is time-consuming and expensive.
- Countries are not yet adopting the right targets and indicators to assess whether they are achieving sound, equitable natural resources management for poverty reduction.
- Many countries lack the data or the resources to adequately monitor progress in environmental sustainability.
- In other instances, a lack of reporting suggests that countries are not making sufficient investments in environmental resources or environmental governance. They therefore choose not to report because it would reveal poor progress.

Ecosystems and natural resources are critical sources of wealth that can help poor people to escape from poverty

Farmers need information on a range of factors (including soils, crops, livestock breeds and wildlife populations) at the scale of their village or local community. Policymakers need similar information, covering much larger areas. What can be done to help people get the information they need?

The research recommends:

- MDG Target 9 highlights the importance of restoring ecosystems; all national and international policy agendas should prioritise this.
- Development and environmental organisations should support developing countries in setting more appropriate targets and indicators to meet their specific national environmental needs.
- Environmental indicators should be included in all MDG strategies.
- It is important to promote the many benefits of investment in environmental assets, particularly financial benefits.
- The MDG framework emphasises measures that look at the extent of natural resources (such as forest cover), their uses and conditions (such as protected land). These can be useful, but policymakers need new indicators that examine the links between environmental management and poverty reduction.
- Developed countries should monitor their own environmental issues, such as climate change, biodiversity, energy production and agriculture; these can affect the environment in other countries.

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'Assessing environment's contribution to poverty reduction', Poverty-Environment Partnership, 2005
www.undp.org/pei/pdfs/AssessingEnvironmentsRoleinPovertyReduction.pdf

Ecosystem conservation for economic development

Ecosystems produce food, clean water, manage disease and regulate the climate. Over the last 50 years, however, people have changed ecosystems more than at any other time in history.

Changes to ecosystems caused by human activities have caused three major problems:

- sixty percent of ecosystem services are being degraded or used unsustainably
- ecosystem changes have become more unpredictable, leading to dramatic events such as regional climate change
- the negative impacts of ecosystem degradation are mostly felt by poor people, meaning it contributes to increasing global inequality.

The Millennium Assessment (MA), co-ordinated by the United Nations Environment Programme, was carried out between 2001 and 2005 to assess the consequences of these ecosystem changes for humans. The MA aims to establish the scientific basis for actions needed to enhance the conservation and sustainable use of ecosystems and their contribution to human well-being. The MA focuses particularly on ecosystem services and the benefits people obtain from ecosystems.

The MA report shows:

- Increasing human demands for food, water and fuel have led to a large and permanent loss in biodiversity in the last 50 years.
- Most countries have seen significant gains in human welfare and economic development in most countries. However, the impacts of this in terms of degraded ecosystems will be received by future generations.
- Ecosystem degradation represents a loss of capital, but national accounting systems like Gross Domestic Product do not include degradation measurements.
- Managing ecosystem services is difficult because changes are slow and complex. Different people receive and suffer the costs and benefits of changing ecosystem management in different places.

The degradation of ecosystem services is a major barrier to achieving the Millennium Development Goals. What can be done to tackle this situation? The MA suggests:

- Positive future scenarios will require significant investments in environmentally protective technologies, public goods (particularly education and health) and poverty reduction.
- Methods of ecosystem management must be flexible so that they can adapt to future ecosystem changes.
- Development planning must integrate ecosystem management with other sectors. Including better coordination between environmental agreements and international economic and social agreements.
- Governments and private sector organisations must be more open about the environmental impacts of activities.
- Powerful governments must be prepared to eliminate subsidies that promote over use of ecosystem services. At the same time, they must develop financial incentives to ensure payment for ecosystem services.

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'Millennium Ecosystem Assessment synthesis report,' Millennium Ecosystem Assessment, by Walter V. Reid, Harold A. Mooney, Angela Cropper et al, 2005
www.millenniumassessment.org/en/Products.Synthesis.aspx

Students of Banepa, Nepal plant trees in the hillside of their town. Every year students are involved in planting trees in this area. According to the local organiser, if children are made aware of environment issues at an early age, it will impact them for a long time. This year, students planted around 500 trees in the hillside.
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Using community conservation to achieve the MDGs

In many places, globalisation, inappropriate policies and malpractices in government and non-government organisations have resulted in the degradation of many ecosystems. Official conservation policies are often failing to stop this decline. Can community-based conservation efforts achieve better results?

A report from the International Institute of Environment and Development, UK, discusses the importance of community-conserved areas (CCAs) in transforming approaches to conservation. CCAs are natural and modified ecosystems that are voluntarily conserved by indigenous, mobile and local communities through customary laws.

CCAs perform several important functions:

- CCAs can provide corridors for animal movement, often between officially protected areas. In Uttaranchal, India, two critical protected areas are linked by a large area of community forest land managed under the traditional 'van panchayat' (village council) system. This prevents animal populations from becoming isolated and enables the sharing of genetic materials across a wider area.
- CCAs help to strengthen the links between agricultural diversity and wild biodiversity. In Peru, communities are establishing bio-cultural heritage sites such as the Potato Park, where indigenous populations are reviving many traditional species of potato. This conserves the landscape, enhances people's incomes and livelihoods and preserves traditional knowledge.
- CCAs often combine traditional knowledge and modern science, helping to achieve conservation that is more effective. The Alto Fragua-Indiwasi National Park, Colombia, was established at the request of the Ingano indigenous people. Zoning and management planning within the park have combined the ecological knowledge of local people with scientific Geographical Information System-based mapping.

In Peru, indigenous communities are establishing a Potato Park which revives traditional species of potato

The sustainable use of resources in many CCAs is often more effective and longer established than in government-managed conservation areas, yet they are often neglected or not recognised by official conservation policies. The report argues that they are important for meeting several Millennium Development Goals (MDGs).

The first MDG aims to halve extreme poverty through increasing the security of poor peoples' jobs and livelihoods. CCAs can provide this through continued or increased access to vital ecological services, such as clean water. CCAs can provide an opportunity to empower marginalised people, encouraging communities and individuals to participate more confidently in social and political processes. Women are often at the forefront of community conservation initiatives, which can help to achieve the third MDG of gender equity.

Perhaps most importantly, CCAs contribute to the seventh MDG of ensuring environmental sustainability. CCAs are a valuable mechanism for expanding the criteria for achieving MDG7 and for making links between environmental sustainability and human well-being. Policies now need to ensure that CCAs are recognised and supported.

The report recommends:

- Governments should acknowledge and promote CCAs as a legitimate form of biodiversity conservation.
- Where communities agree, CCAs should be included in national systems of protected areas, with the appropriate changes to legal processes and policies.
- Governments should ensure that official policies, guidelines and principles recognise the diversity of local arrangements developed by communities for the management of CCAs. Informal arrangements are as important as formal ones.

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'Conservation with social justice? The role of community conserved areas in achieving the Millennium Development Goals,' by Neema Pathak, Ashish Kothari and Dilys Roe, pages 55-78 in *How to Make Poverty History – the central role of local organizations in meeting the MDGs*, IIED: London, edited by Tom Bigg & David Satterthwaite, 2005
www.iied.org/Gov/mdgs/documents/mdg3/ch3_24pp.pdf

case study

Protecting the marine environment in the Vietnam Sea

Vietnam's marine environment is being degraded because of country's economic development, population growth and human activities in coastal areas; they also suffer from climate change and pollution from other countries.

The Vietnam Sea is important in the economic and social development of East and South-East Asia. Research by the Institute of Marine Environment and Resources, Vietnam, assesses the domestic laws dedicated to protect the marine environment and international environmental programmes.

The Vietnam Sea suffers from:

- **high-density development and the associated infrastructure, including dams, oil development and logging, which have damaged the tidal floodplain and the environmental quality of the Vietnam Sea**
- **declining biological productivity due to these developments; impacts include the degradation of habitats such as tidal flats, mangrove marshes, beaches, sea grass beds and coral reefs**
- **natural processes that affect marine ecosystems, including an increasing intensity and frequency of coastal floods, increasing coastal erosion and saltwater intrusion.**

Vietnam's national environmental strategy includes a system of central and local environmental management agencies, strict environmental laws and regulations and several local environmental projects. However, this has not been enough. Since 1985, international assistance has aided the Ministry of Science, Technology and Environment and the National Environment Agency in marine conservation efforts. Although this aid has been effective, its impact has been limited by unequal distribution. While international assistance has been critical to some schemes, there have been inadequate funds in other places. Furthermore, the funds have not always been used effectively. For example, few projects have included effective training programmes for conservation staff.

The research identifies ways to increase the impact of international assistance:

- **international aid agencies must deliver more financial aid**
- **the decentralisation of international aid will enable funds to reach more projects (this process is already beginning)**
- **diversifying the type of organisations receiving aid, including coastal community groups and small-scale conservation projects, will enable funds to reach remote and previously under-funded regions**
- **multilateral funds, such as the Global Environment Fund, should be made available for protecting international waters and conserving marine biodiversity.**

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'Protecting the Marine Environment: International Assistance and the Vietnam Sea' by T. D. Thanh, T. D. Lan and P. V. Luong, pages 183-200, in Confronting Environmental Change in East and SouthEast Asia, edited by Paul G. Harris, 2005

Payments for environmental services

Implementing effective conservation policies has proved difficult in many developing countries. Traditional projects that link conservation and development have not always been successful: with both long-term funding and mixed objectives are common problems.

Making people pay for environmental services is an alternative that can be more cost-effective. However, designing these payments is not always straightforward. Research from the Center for International Forestry Research (CIFOR) examines Payments for Environmental Services (PES) as a way to achieve conservation objectives in developing countries.

PES schemes are designed to promote environmentally friendly land uses. For example, a buyer could be a water company who pay a seller, such as upland land users, to protect a watershed, ensuring they receive a reliable supply of clean water. Other examples include carbon sequestration (planting trees to capture carbon dioxide), maintaining landscape beauty for tourism and protecting biodiversity.

Conservationists are debating what kind of arrangements should count as PES. CIFOR's research suggests four criteria for a PES scheme:

- arrangements should be voluntary
- they should be linked to a well-defined environmental service
- there must be at least one buyer and at least one provider
- there should be conditionality, meaning that the service should be monitored and, if it is not provided, then payments should stop.

In many developing countries, it is still difficult to find schemes that meet all these conditions. Many existing schemes are only PES in part; for example, the arrangements may not be voluntary or conditional. For schemes to appeal to buyers, a project must show additionality, meaning the activity must produce more environmental services than would have happened without the scheme. However, with a lack of data on many environmental processes, it may be difficult to fully document these improvements.

Poor smallholders will normally benefit from PES schemes. However, poor landless people could suffer from PES, for example, if schemes protect forest cover that poor people otherwise would have cleared for agriculture or charcoal making. While PES schemes are more direct than traditional projects, they can sometimes have high transaction costs, linked to defining buyers, sellers and payment modes.

PES is only one among many conservation tools. It is suitable for some situations, but cannot be applied everywhere. In fact, PES may be most effective supporting traditional conservation projects or compulsory laws to protect the environment. Policymakers and PES implementers must consider the following issues when deciding where to introduce PES schemes:

- Pro-poor schemes can be designed to benefit smallholders, for example, by including people with informal rather than legalised land tenure. However, if PES are over-designed to mainly address poverty and other side-objectives, instead of focusing on conservation, they may not attract private sector buyers and will eventually fail.
- For schemes to be successful there must be trust between buyers and sellers. Intermediaries can play an important role in building this trust.
- It is important to avoid creating perverse incentives. For example, communities might decide suddenly to threaten ecologically harmful activities in order to capture environmental service payments (environmental blackmail).
- A major challenge is persuading buyers of the need to pay for benefits such as clean water that they previously received for free.

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Payments for environmental services: some nuts and bolts, Center for International Forestry Research, Occasional Paper No. 42, by Sven Wunder, 2005
www.cifor.cgiar.org/publications/pdf_files/OccPapers/OP-42.pdf

useful websites

Bushmeat Crisis Task Force
www.bushmeat.org

Centre for Social and Economic Research on the Global Environment
www.uea.ac.uk/env/cserge

Community-Based Natural Resource Management Network
www.cbnrm.net

Envirolink
www.envirolink.org

Foundation for International Environmental Law and Development
www.field.org.uk

Institute of Environmental Management and Assessment
www.iema.net

International Institute of Environment and Development
www.iied.org

IUCN - The World Conservation Union
www.iucn.org

Millennium Ecosystem Assessment
www.millenniumassessment.org/en/index.htm

United Nations Environment Programme
www.unep.org

World Environment Centre
www.wec.org

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