

Biodiversity and Poverty Reduction

This key sheet is part of a series of awareness raising tools developed by Irish Aid to accompany its Environment Policy for Sustainable Development.



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1. Introduction

This key sheet is part of a series of awareness raising tools developed by Irish Aid to accompany its Environment Policy for Sustainable Development. Key strategies for implementing the policy are:

- i) mainstreaming, where the environment is recognised as a critical part of sustainable development and is taken into account in all policies, programmes, activities and funding decisions; and
- ii) partnership, where Irish Aid works with national governments, multilateral organisations, international agencies and civil society organisations to contribute to sustainable development.

The first step in environment mainstreaming is to understand how the environment is linked to the development challenge or sector YOU are responsible for. In this key sheet, we describe why the conservation and sustainable use of biodiversity is essential to poverty reduction, and suggest sources of additional information. More detailed guidelines on mainstreaming environment and development will be produced at a later date.

Biodiversity matters to development because:

- > Biodiversity underpins the 'ecosystem goods' (for example food and fuel) and 'services' (e.g. climate regulation, water supply) upon which society depends.
- > Poor people are most directly dependent on these goods and services, and therefore are most affected by the loss of biodiversity;
- > Biodiversity loss undermines the food security, nutrition and health of the rural poor and increases their vulnerability to external shocks.
- > Biological resources (timber, fisheries, productive land) make up a large proportion of the 'wealth' of developing countries and are a comparative advantage on which economic development can be built.





Girl selling reeds in Tahoua village, Niger.

2. How are biodiversity conservation and poverty reduction related?

2.1 What is biodiversity and why is it important?

There is no universally accepted definition of biodiversity. The Convention on Biological Diversity broadly defines the term to encompass the variety of all life on Earth, including the variability within and between genes, species and ecosystems. Biodiversity is thus another word for the world's range of living natural resources — including wildlife, fisheries, forests, crops, livestock and so on. This diversity is important, especially to the rural poor, for a number of reasons:

- > Biodiversity is the source of 'ecosystem goods and services', ranging from food, building materials and medicines to climate regulation and clean water supplies (see Box 1).
- > Poor people often depend directly on such goods and services on a daily basis for subsistence or income.
- > The poor are therefore most affected when environments are degraded and biodiversity is lost, as this diminishes the quality and quantity of goods and services available to them (richer people can often afford substitutes).
- > Diversity increases people's options and therefore their resilience to extreme events such as drought, disease

and the effects of climate change, to which the poor are especially vulnerable. A diverse agricultural base, for example, provides farmers with more resistance to pests and diseases that may affect some crops but not others.

- > Biodiversity can help mitigate such events and provide households with a critical 'safety net' during hard times.

2.2 Biodiversity and poverty: findings from the Millennium Ecosystem Assessment

In June 2005, the heads of five UN conventions dealing with biodiversity issued a joint statement that emphasised the importance of biodiversity for the achievement of the Millennium Development Goals (see Box 2). It added: "Biodiversity can indeed help alleviate hunger and poverty, can promote good human health, and be the basis for ensuring freedom and equity for all."

The Millennium Ecosystem Assessment (MA 2005) found, however, that most ecosystems are being degraded or used unsustainably, and that biodiversity is being lost at a unprecedented rate. It said the costs and risks of this loss are set to increase and fall disproportionately on the poor.

The assessment added that environmental degradation is promoting social inequities and is sometimes the main cause of poverty and social conflict. Tackling biodiversity loss is therefore critical to international efforts to reduce poverty.

▾ Box 1 Ecosystem goods and services

Biodiversity provides humanity with various goods and services whose value is rarely factored into policymaking, in part because it is hard to quantify benefits in financial terms.

Natural products derived from biodiversity include food (fruit, fish, meat, crops), fuel, fibre, and building materials. Biodiversity also makes a major contribution to human health as many traditional medicines and modern drugs are based on plants or other species (see Box 2).

Natural processes that humanity depends on are products of 'ecosystems' — dynamic communities of animals and plants interacting with one another and with their physical environment. Changes to an ecosystem's composition can affect delivery of these services, which include:

- > Regulation of climate through storage of carbon
- > Soil formation and nutrient cycling
- > Pest control and pollination of crops by wild species
- > Purification of water by wetlands
- > Conversion of carbon dioxide to breathable oxygen
- > Protection of coastal settlements from cyclones by mangrove forests

Biodiversity also has a cultural value because of its aesthetic and spiritual importance.

3. The CBD and poverty reduction

3.1 Key objectives of the CBD

The Convention on Biological Diversity (CBD) was adopted at the 1992 Earth Summit and came into force in December 1993. It has three objectives:

- > The conservation of biological diversity
- > The sustainable use of the components of biological diversity
- > The fair and equitable sharing of the benefits arising from the utilisation of genetic resources.

In 2002, the parties to the CBD committed themselves to “a more effective and coherent implementation of these objectives... to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth”.

The UN World Summit on Sustainable Development endorsed this ‘2010 target’ later that year in Johannesburg. At the 2006 UN General Assembly, the target was made a sub-target of MDG7 (Box 2). The CBD is now the world’s most widely adopted multilateral environmental agreement.

▾ Box 2 How biodiversity contributes to achievement of the Millennium Development Goals (MDGs)

All 191 UN member states and development agencies have committed to achieving the Millennium Development Goals (MDGs) by 2015. Only one of the goals deals specifically with biodiversity conservation (MDG7: Ensure environmental sustainability). It includes a target to ‘integrate the principles of sustainable development in country policies and programmes and reverse the loss of environmental resources’. Of the eight indicators for MDG7, two specifically address biodiversity:

- > Indicator 25: the proportion of land area covered by forest; and
- > Indicator 26: the ratio of area protected to maintain biological diversity to surface area.

Beyond MDG7, the conservation and sustainable use of biodiversity has clear implications for the achievement of the other goals:

MDG 1: Eradicate extreme poverty and hunger

Biodiversity and ecosystem services are essential to the productivity of agriculture, forests, and fisheries. Ecological goods and services (Box 1) enable people to derive livelihoods and incomes from natural and managed landscapes. Degraded ecosystems make the poor more vulnerable to droughts, floods, landslides and other natural disasters.

MDG 2 and 3: Achieve universal primary education; Promote gender equality and empower women

Impacts of environmental degradation often fall disproportionately on women and girls. The increased time they must spend searching for drinking water, fuel wood, and other forest products limits their opportunities for education, literacy and income-generating activities.

MDG 4, 5 and 6: Reduce child mortality; Improve maternal health; Combat major diseases

Eighty per cent of Africans rely on traditional medicines derived largely from local plants. The modern pharmaceutical industry also depends on biodiversity: of the 150 most frequently prescribed drugs, more than half are based on natural compounds.

Environmental degradation can also increase the spread of malaria, dengue fever, and other insect- and water-borne diseases. Loss of biodiversity and ecosystem services can lead to economic disruption and population dislocation, particularly to crowded urban areas, which encourages the spread of infectious diseases such as tuberculosis, hepatitis, and HIV.

MDG 8: Develop a global partnership for development

Maintaining biodiversity and critical ecosystem functions will require global partnerships of governments, the private sector, and civil society in developing and industrialised countries. This goal commits, among other things, developed countries to increase development aid and open their markets to developing-country products. Such efforts should support rather than degrade the biological resource base on which achievement of the MDGs depends.

Source: Roe (2004)

3.2 Sustainable and equitable use of biodiversity

The CBD recognises that “economic and social development and poverty eradication are the first and overriding priorities of developing countries” and that these must be balanced with concerns for biodiversity conservation.

It promotes protected areas as the main way of conserving biodiversity, but also emphasises the need for equity in the governance of such areas and is as concerned with the sustainable use of biodiversity as with strict protection. Further it recognises that fiscal or market incentives, for example, can encourage a shift to production patterns with reduced impacts on biodiversity.

↘ Box 3 Managing biodiversity in the Bale Mountains, Ethiopia

Irish Aid funds the Ethiopian Bale Eco-region Sustainable Management Programme in collaboration with the Norwegian and Dutch Governments. The programme supports improved planning and management of the largest area of Afroalpine habitat on the African continent. This area forms the watershed of the Bale Massif, which is critical for the livelihoods and well-being of hundreds of thousands of people in the lowlands of southeast Ethiopia and Somalia. The eco-region includes the Bale Mountains Protected Area and the surrounding forests, watersheds and farmland. Together these habitats are host to a globally unique and diverse fauna and flora, including several rare and endemic species. By putting in place measures to sustainably manage the eco-region, the programme will conserve valuable biodiversity and contribute to local livelihoods.

In particular the CBD emphasises the importance of traditional knowledge in conserving biodiversity and supporting local livelihoods. Outsiders sometimes expropriate such knowledge and return few benefits to the community, as can happen when researchers ‘bio-prospect’ for potential new drugs among rainforest plants. The CBD requires those (usually from industrialised countries) who seek access to biodiversity to obtain the prior informed consent of the country providing genetic resources (usually biodiverse developing nations). The research and any benefits that arise from its commercialisation should be shared in a fair and equitable way with the country providing the resources.

3.3 Trade-offs between MDG and CBD targets

One of the most disturbing findings of the Millennium Ecosystem Assessment is that most of the world’s ecosystems are so degraded that reaching the CBD’s 2010 target or the MDGs by 2015, could prove impossible unless remedial action is taken urgently. Tradeoffs between achieving these aims are also inevitable. Many strategies for addressing poverty are likely to accelerate biodiversity loss unless they factor in the value of biodiversity and ecosystem services.

Roads, for example, can benefit remote communities by increasing their access to markets, schooling and healthcare, but also promote logging, hunting and other forms of exploitation. Equally, strictly managed protected areas can exacerbate poverty by denying local people access to natural resources on which they depend.

Win-win strategies do exist. Community Based Natural Resource Management, for example, can benefit the poor while helping to conserve biodiversity (Box 3). This usually requires strong local institutions, secure communal land rights and supportive government policies (see Key sheet on environment and governance).

↘ Box 4 CBNRM from Tanga in Tanzania

Irish Aid supported the Tanga Coastal Zone and Conservation Development Programme for over 10 years. This programme, implemented by the World Conservation Union (IUCN), contributed to local livelihoods while conserving biodiversity. Sustainable fishing practices contributed to a significant improvement in coral reef health and fish stocks. Seaweed production was introduced as a new source of income for women. Mangroves were replanted and are managed to protect the coast from erosion and storms. As a result, Tanga is the only region in Tanzania where the mangrove area has increased in the past decade. The community management systems introduced in Tanga were so successful that they were adopted as a best practice model in the National Coastal Zone Management Policy.

3.4 Global funds for biodiversity conservation

While the responsibility for managing biological resources rests with the country in which those resources occur, the CBD recognises that biodiversity is a global public good, as many of the benefits of sound management accrue internationally. Developed-country parties are thus encouraged to provide funds to developing countries to help them meet their CBD obligations. This can occur via the Global Environment Facility (Box 5) and other multilateral or bilateral channels.

▾ Box 5 The Global Environment Facility (GEF)

The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is based on the application of appropriate scientific methodologies focused on levels of biological organisation which encompass the essential processes, functions and interactions among organisms and their environment. It recognises that humans, with their cultural diversity, are an integral component of ecosystems. The ecosystem approach is the primary framework for action under the Convention on Biological Diversity.

4. Mainstreaming biodiversity in development assistance

Donor agencies are increasingly committed to country-led development and are moving more towards direct budget support instead of the more traditional project-based approach to aid delivery. This makes targeting biodiversity conservation more difficult than previously. The challenge for development agencies is to incorporate biodiversity conservation into these new approaches. This implies promoting processes that enable civil society groups to participate in national level policy making and hold governments to account for their obligations under the CBD. A first challenge, however, is to increase awareness of biodiversity issues within development agencies and to build capacity for dealing with them.

Internal Processes:

- > Building awareness: providing resources for staff such as this key sheet and including biodiversity issues as part of its induction programme for staff in its HQ and programme countries.

- > Ensuring biodiversity concerns are adequately addressed within country programming and other grant schemes will require enhanced technical capacity within Irish Aid.
- > Many donor agencies have environmental screening procedures for their investments. The majority of these are not explicit about biodiversity concerns but could easily be adapted to screen for biodiversity risks.
- > Non-biodiversity grant funds (such as the Civil Society and Development Education funds) could be encouraged to explore the potential of addressing the links between biodiversity and development, and others could be established to specifically focus on biodiversity.

Bilateral Processes

- > Biodiversity issues should be included in the policy dialogue process with partner countries. This will require enhanced awareness amongst country programme staff and also the incorporation of biodiversity issues in guidance for producing country strategies and action plans.
- > Country programme staff should explore the potential for including biodiversity issues in sectoral plans – such as agriculture, health, education – as well as in the overall country strategy.
- > Country programmes can also encourage and support capacity for increased attention to biodiversity in Poverty Reduction Strategic processes.
- > Strategic Environmental Assessment procedures could be expanded to address biodiversity implications in macro-economic, trade and sectoral policies and programmes so that their negative impacts on biodiversity can be identified and reduced or mitigated. The CBD Secretariat has produced a number of guidance documents to help (www.biodiv.org/programmes/cross-cutting/impact/guidelines.shtml).
- > Donor agencies have an important role to play in improving the governance of natural resources and biodiversity by supporting effective decentralisation and strengthening community participation, institutions and rights so that local users of biodiversity can better manage and defend their resources.
- > The obligations conferred by the CBD are not confined to the conservation of biodiversity or the sustainable management of natural resources. Much can be done to help fulfil the CBD objectives by raising awareness about the commitments on other issues – intellectual property rights, traditional knowledge, access and benefit sharing arrangements, biosafety – within other ministries – e.g. trade, investment, agriculture.

International Action

- > The continued operation of the GEF is dependent on financial resources from donor countries and here again influence can be exerted: the GEF supports developing country governments to fulfil their obligations under the CBD in producing National Biodiversity Strategies and Action Plans (NBSAPs). Donors could work to ensure that these NBSAPs are integrated with PRS's and vice versa.
- > Achieving the MDGs is a central objective of Irish Aid. Biodiversity conservation is part of MDG7 and contributes to the achievement of the other MDGs. But biodiversity – and environment in general – continues to be marginalised within the MDG process. Irish Aid's involvement with the Poverty Environment Partnership, the Poverty Environment Initiative and the Poverty and Conservation Learning Group is an effective way to encourage multi-stakeholder dialogue and learning on the critical links between poverty reduction and biodiversity conservation.
- > As well as its bilateral programme, Irish Aid works with and through the EU and the United Nations and can help to influence policies and processes that pay better attention to biodiversity concerns.

↳ Box 6 Poverty and Conservation Learning Group

Supported by Irish Aid and the Ford Foundation, the Poverty and Conservation Learning Group (www.povertyandconservation.info) aims to facilitate dialogue and learning amongst conservation and development organisations on the links between biodiversity conservation and poverty reduction.

This occurs through:

- > promoting good practice by sharing information on an open access website
- > influencing policy by providing a programme of 'learning activities' to organisations working on conservation-poverty linkages

References and Resources

Roe, D (2004) The MDGs and Conservation: Managing Nature's Wealth For Society's Health. IIED, London
<http://www.iied.org/Gov/mdgs/publications.html>

Biodiversity in Development Briefing Papers
<http://www.iucn.org/themes/wcpa/pubs/biodiversityproject.htm>

WRI (2005) World Resources 2005: The Wealth of the Poor: Managing ecosystems to fight poverty. World Resources Institute, Washington DC

UNDP Biodiversity for Development CD Rom
<http://www.undp.org/biodiversity/biodiversitycd/>

Useful websites

- The Poverty and Conservation Learning Group
www.povertyandconservation.info
- Millennium Ecosystem Assessment
www.maweb.org
- The Convention on Biological Diversity
www.biodiv.org
- UNDP Biodiversity Theme
www.undp.org/biodiversity/
- IUCN Biodiversity in Development Cooperation Conference
www.countdown2010.net/paris2006/index.html

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