



Why UNDP is involved in Biodiversity Management

1. The Issues

i. Biodiversity Loss

Biodiversity underpins development through the provision of products such as food, fibre and medicines and ecosystem services such as the regulation of water supply and air quality. Though billions of people around the world depend on such 'goods' and services, this contribution is neither fully recognized nor valued in markets. As a consequence, biodiversity is being lost at an unparalleled pace as natural resources are used without considering their other values, with the result that the capacity of ecosystems to sustain the delivery of goods and services is being undermined. Human activity has disrupted the carbon and nitrogen cycles, the food chain, and the water cycle. The Millennium Ecosystem Assessment (2005) concluded that almost 60% (15 out of 24) of the ecosystem services that support life on Earth and make a direct contribution to human wellbeing - such as provision of freshwater, pollination and the regulation of regional climate - are being destabilized.

ii. Biodiversity Loss and Poverty Alleviation

Poor rural communities depend on ecosystem goods and services for health and nutrition as a safety net when faced with climate variability and natural disasters, and for crop and stock development amongst other things. A study from India, reported in the TEEB Report (The Economics of Ecosystems and Biodiversity) published by the European Commission and the German Federal Ministry for the Environment in 2008, showed that ecosystem services contribute up to 57% of the GDP of the poor. It also showed that unlike the rich the poor are unable to replace ecosystem services with built infrastructure (for example, by building flood control infrastructure once natural flood defenses provided by forests and wetlands have been lost). A UNDP-funded Study (2005) showed that local communities living in the wetlands of northern Botswana earn up to US\$ 1500 per household in imputed income from the harvest of fish, thatch for construction or for basket weaving, employment in the nature tourism industry, and grazing of cattle in the nutrient-rich flood plains. While the incidence of poverty is high in northern Botswana, measured on the basis of cash incomes, there is little absolute poverty in the wetlands as communities enjoy a subsistence 'affluence' through the harvest of natural resources.

iii. Biodiversity Loss and Climate Change

Anthropogenic climate change is exacerbating and being accelerated by biodiversity loss and ecosystem degradation. Healthy ecosystems – for example, forests and bogs – contain massive carbon reservoirs and are vital to regulating the global climate. While climate change poses an immense challenge today, the continued degradation of these ecosystems threatens to exponentially increase greenhouse gas emissions and intensify the negative effects of climate change in the future. The sustained supply of certain ecosystem services, for example stream flow regulation in drought prone areas, will be critical in buffering human populations from the adverse impacts of climate change, including coastal flooding, droughts and other hazards. Healthy and diverse natural ecosystems are expected to be more resilient in the face of climate change – more able to sustain the supply of ecosystem services under climate change – than degraded ones.

2. What UNDP Does to Combat Biodiversity Loss and Ecosystem Degradation

The sustainable management of biodiversity and ecosystem services are keys to achievement of the Millennium Development Goals (MDGs) and to combating poverty. UNDP addresses biodiversity loss because biodiversity loss threatens to increase poverty and undermine development, but also because the causes of biodiversity loss stem from under-development. In particular, the two main causes of biodiversity loss are weak governance systems (policies, institutions and accountability) and market failures, whereby the market fails to signal a price for many of the diverse services provided by ecosystems. Support to government authorities to address the governance and market failures that drive biodiversity loss requires the broad experience, ability to leverage, and trusted credibility of a neutral UN agency. This work cannot easily be undertaken by specialist UN agencies and conservation NGOs, which have less capacity and experience in dealing with governance and market reform within a development context. UNDP's engagement in the business of biodiversity management is thus essential if biodiversity loss is to be mitigated.

The objective of UNDP's biodiversity work is maintaining and enhancing the beneficial services provided by natural ecosystems in order to secure livelihoods, food, water and health security, reduce vulnerability to climate change, and store carbon and avoid emissions from land use, land use change and forestry (LULUCF).

UNDP is addressing biodiversity loss and ecosystem degradation through two signature programmes:

- (i) Mainstreaming biodiversity management objectives into economic sector activities, to ensure that production processes maintain essential ecosystem functions that sustain human welfare; and
- (ii) Unleashing the economic potential of Protected Areas (22 % of the Earth's surface area, including indigenous and community conservation areas), so that they are able to fulfill their management functions, are sustainably financed and contribute towards sustainable development.

UNDP's portfolio of biodiversity projects, mainly funded by the GEF, consists of 177 projects under implementation, with a value of US\$ 533 million directly administered by UNDP, or counting parallel funds, a value amounting to US\$ 1.879 billion. In addition, UNDP has a GEF pipeline of 120 projects, with a value of US\$ 350 million in funds administered by UNDP and co finance of US\$ 1 billion. The UNDP-GEF Small grants programme has provided grants of US\$ 130 million to 6300 projects that are enabling local communities to better manage the ecosystems and natural resources on which they depend.

A number of other UNDP environment programmes also contribute towards biodiversity management, including the Poverty Environment Initiative, the UN REDD Programme, UNDP's International Waters programme, and initiatives of the Nairobi based Dry Lands Development Centre.

UNDP's biodiversity management work is aligned with the four Key Results of the Strategic Priority on Environment and Sustainable Development, agreed in UNDP's Strategic Plan for 2008-2011. A summary of UNDP's work and examples of UNDP's activities are provided below.

Environmental Mainstreaming:

UNDP is assisting programme countries to: (i) develop accountable decision-making frameworks and capacitated institutions to govern ecosystem and natural resource use; (ii) develop sound development policies

that address biodiversity loss; and (iii) build leadership and skills within institutions responsible for biodiversity management including in economic sector institutions that influence how biodiversity is used.

Examples of UNDP work

Tanzania's forests act as a safety net for the extremely poor, providing them with resources for subsistence. Studies have shown that 40 percent of total household consumption in some rural areas is accounted for by forest and woodland products such as honey production, firewood harvests, construction material, wild fruit and other foods. Sustainable management of forest resources is therefore essential, as is full stakeholder involvement in the design and implementation of forest management plans. Yet local communities often earn only a fraction of the value of forest products that they harvest. A recent economic analysis of the returns from one commodity, timber, harvested in southern Tanzania showed there is considerable scope to increase returns at the community level. The survey showed the harvester received USD 3.5/m³, license fees cost USD 70/m³ and export secured USD 330/m³, while processed timber obtained USD 1500/m³. UNDP has a number of initiatives in Tanzania, financed by the GEF, UN REDD Programme, International Climate Initiative and TRAC to strengthen forest management, including setting up joint forest management systems with local communities, and ensuring that a larger share of the income from forest resource harvests accrue to these communities.

The UNDP-UNEP Poverty–Environment Initiative (PEI) is helping countries mainstream poverty-environmental linkages into national development planning processes. Following a successful pilot phase in nine African and Asian countries, this programme is now being scaled up around the world. A number of 'How to' Primers, developed by the PEI, such as a Primer on Valuing the Environment, are providing policy makers with knowledge and reference materials to strengthen decision-making.

The UNDP Dryland Development Centre is working to maintain ecological resilience in the world's drylands. Over 40 percent of the earth's surface is made up of drylands, which provide homes to an estimated 2.3 billion people, including almost half of the world's poor. The Dryland Development Centre has launched the Integrated Drylands Development Programme, currently implemented in 19 countries in Africa and the Arab States. This programme addresses development issues in the drylands through three complementary approaches – mainstreaming dryland management issues into national development policy and planning; reducing the vulnerability of poor populations to climatic shocks; and improving governance of natural resources.

Environmental Finance/Markets:

UNDP is working with programme countries to: (iv) address market failures that distort prices and lead to over-exploitation of ecosystems and natural resources; and (v) combine and sequence different sources of funds so as to address biodiversity loss.

Examples of UNDP Work

The Strengthening the Protected Area Network (SPAN) Project in Namibia, a US\$ 8.55 million GEF-financed initiative, is assisting the Government to identify, combine and sequence funding from different sources to finance Protected Area (PA) management in the country. One of the major financial barriers affecting PAs in many countries is under-valuation of the economic benefits of PAs, resulting in under-investment by the

Governments in the PA system. The project undertook a comprehensive economic analysis of the PA system in 2004. The results indicated that the PA system contributed up to 6% of Namibia's GDP, counting park based tourism only, without including other ecosystem services values, and the economic rate of return on the government investment over 20 years was as much as 23%. The study showed that further investment in PAS could lead PAs to contribute up to 15% of GDP in the medium term. These study results were used by Namibia's Ministry of Environment and Tourism to negotiate an increase in the State budget for park management and development by 310% in the last four years and in addition, to earmark 25% of park entrance revenue for reinvestment in the PA system through a trust fund, providing up to US\$ 2 million additional financing per annum. The study also led to successful mobilisation of a large amount of additional donor funding for PAs, including US\$ 15 million from Germany and a US\$ 67 million grant from the Millennium Challenge Account (MCA) to build PA infrastructure and strengthen community-based nature tourism, an investment that is expected to create 6,000 new jobs. UNDP is implementing similar initiatives across the world, including in Chile, Venezuela, Haiti, Zambia, Egypt, the Ukraine and Malaysia.

A GEF-funded UNDP initiative in Central and South America is working to increase production of Rainforest Alliance certified coffee, produced under biodiversity-friendly shade production systems and according to strict social standards that aim to increase prices paid for coffee at the farm gate and avoid child labour. Sales of certified coffee have risen by over 50,000 metric tonnes, over a baseline of 27,000 metric tonnes. A number of major companies, including McDonald's Europe, Kraft Foods, British Airways and Whole Foods are purchasing the product. UNDP is in the process of setting up a Green Commodities Facility that will work to strengthen the environmental and social sustainability of other commodities, including fisheries, soy beans and cocoa.

Climate Change Adaptation and Mitigation:

(vi) UNDP activities are aimed at managing ecosystems to improve their climate change mitigation and adaptation potential.

Examples of UNDP work

One of the key elements of the UNDP biodiversity strategy is restoration and sustainable management of carbon pools in natural ecosystems.

GEF-funded projects in South-East Asia and Europe have, for example, been working to reduce carbon emissions from peatlands. Peatland degradation has the potential to emit greenhouse gasses which according to different estimates, could have a global warming potential that is equivalent to 13- 30% of the global emissions from fossil fuel combustion. The economic losses from peatland fires in Asia in the past decade have exceeded US\$ 3 billion (counting losses in timber, agriculture and non-timber forest products), whilst the smoke cost an additional US\$ 1.4 billion, most of which was borne by Indonesia through additional health treatment costs and lost tourism revenues. A UNDP project in Malaysia has worked to improve forest management and restore peat swamps in Sarawak State, Sabah, and South East Pahang. This initiative is providing a replicable demonstration of sound peat swamp management practices. In Europe, UNDP has invested in peatland restoration projects in Belarus, Lithuania, Ukraine, Slovakia and Bosnia and Herzegovina. In Belarus, UNDP has helped to restore 23,000 ha of degraded peat-soils, stopping annual emissions of about half-a-million tons of CO₂ while saving the country tens of millions of dollars in fire-fighting operations costs.

The boreal forests of Kazakhstan represent an irreplaceable virgin carbon sink containing 102,720,000 tons of carbon stored in the dry above-ground biomass. A UNDP project financed by the GEF and the German International Climate Initiative is supporting the expansion of protected areas in the Altai Sayan Mountains, recognizing that protected areas provide a tested land governance system for reducing deforestation and forest degradation. The initiative will expand the national PA estate by 250,000 hectares, and institute an integrated fire management system that equips the country to address the additional fire hazards (in terms of both fire frequency and fire intensity) that are expected to occur as a result of anthropogenic climate change.

The UN REDD Programme, a joint initiative of UNDP, UNEP and the FAO, is working with nine countries around the world (Tanzania, Zambia, the Democratic Republic of the Congo, Bolivia, Paraguay, Panama, Indonesia, Vietnam and Papua New Guinea) to strengthen the governance framework for forest management. This is intended to reduce carbon emissions from deforestation and forest degradation over previous reference emissions levels, and attract payments from developed countries for the avoided carbon emissions.

Local Level Response Capacity:

UNDP is working with programme countries to: (vii) develop rights based approaches to development that give local communities and other key stakeholders an incentive to improve local environmental management.

Examples of UNDP Work

The UNDP Equator Initiative provides a platform for bringing together local environmental managers through a global knowledge and advocacy network, to manage biodiversity by strengthening the capacity for local actions. The Initiative has recognized 103 examples of local best practice in biodiversity management and poverty reduction from 55 countries, awarding over US\$ 1,280,000 to the community practitioners and drawing the attention and participation of high-level politicians, policy-makers and international media. In addition to extensively documenting cases of community-based best practice in conservation and economic development, the Initiative has held ten community dialogue spaces, fostering local peer-to-peer knowledge exchange and local-national-international policy bridges.

3 What UNDP does not do

UNDP does not address all aspects of biodiversity management, leaving to specialist UN Agencies and the NGO community functions that are not aligned with UNDP's mandates as a development agency. These functions include both *in situ* and *ex situ* species management (NGOs in the lead), biodiversity mapping (UNEP in the lead, together with NGOs), access and benefit sharing and biosafety (UNEP and FAO in the lead), and management of *ex situ* agro-biodiversity (FAO in the lead with the CGIAR networks).

4. Additional Information

Additional information on UNDP's work on biodiversity management may be down-loaded from UNDP's web site: <http://www.undp.org/gef/05/portfolio/biodiversity.html>