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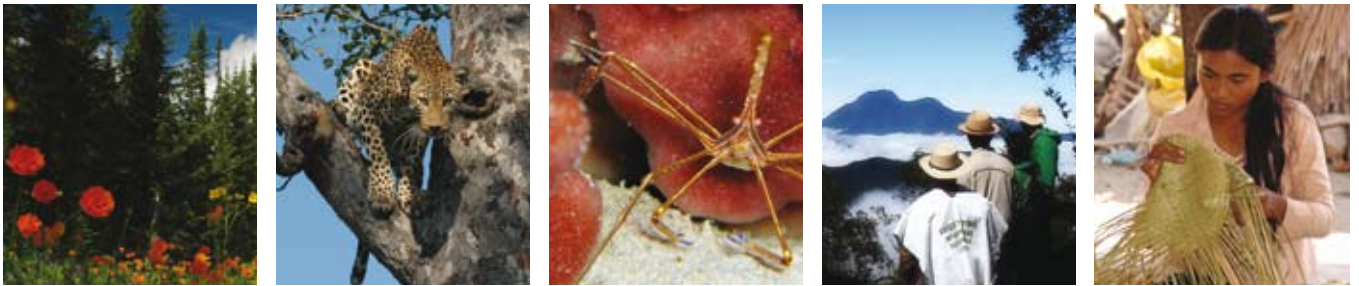
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UNDP'S WORK *on* BIODIVERSITY MANAGEMENT



UNDP ENVIRONMENT & ENERGY GROUP





The Issues

Biodiversity Loss

Biodiversity underpins development through the provision of ecosystem 'goods' such as food, fibre and medicines and ecosystem 'services' such as crop pollination and the regulation of water supply. Though billions of people around the world depend on such goods and services, this contribution is neither fully recognized nor valued in markets. Ecosystems, species and genes—the building blocks of biodiversity—are being lost at an accelerating pace because they are being exploited without consideration for their broader ecosystem and economic values. Ecosystems are being lost as a result of land use conversion, for example, the conversion of forests to farmland and drainage of wetlands for infrastructure development. Ecosystems are suffering degradation from these same processes, plus pollution and unsustainable uses of their natural resources. Species are being threatened by ecosystem loss, degradation, fragmentation and pollution, by the spread of invasive alien species that prey on or out-compete indigenous species and by unsustainable levels of harvest. Some scientists refer to the current millennium as the sixth mass extinction. Whereas past mass extinctions occurred over tens of thousands of years, or in some cases millions of years, the current mass extinction is expected to occur over a much shorter geological time span (tens to hundreds of years).

Biodiversity Loss, Development and Poverty Alleviation

Biodiversity loss is a critical development concern. This is because biodiversity loss is disrupting the capacity of ecosystems to sustain the supply of ecosystem goods and services. Human activity has disrupted the carbon and nitrogen cycles, the food chain and the water cycle. The Millennium Ecosystem Assessment (2005) concluded that over 60% (15 out of 24) of the ecosystem services that support life on Earth and underpin human well-being are being destabilized.

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, noted 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 technological fixes (for example, by building flood control infrastructure).

Biodiversity Loss and Climate Change

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

What UNDP Does to Combat Biodiversity Loss



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Child in Bangladesh

The sustainable management of biodiversity and ecosystem services is key to achieving the Millennium Development Goals (MDGs) and combating poverty. UNDP addresses biodiversity loss not only 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 reasons for biodiversity loss are weak governance systems (policies and institutions regulating natural resource use) and market failures, whereby the market fails to signal a price for many of the diverse goods and services provided by ecosystems. Support to government authorities to address these issues often requires the broad global experience, the ability to leverage policy change and finance, and the credibility of a multilateral agency such as UNDP.

THE OBJECTIVE OF UNDP'S BIODIVERSITY WORK IS TO MAINTAIN AND ENHANCE THE BENEFICIAL SERVICES PROVIDED BY NATURAL ECOSYSTEMS, IN ORDER TO SECURE LIVELIHOODS, FOOD, WATER AND HEALTH, REDUCE VULNERABILITY TO CLIMATE CHANGE, STORE CARBON AND AVOID EMISSIONS FROM LAND USE CHANGE.

UNDP's portfolio of biodiversity projects consists of 177 initiatives under implementation, with a value of US\$ 1.879 billion. The Global Environment Facility (GEF) is the largest financier of these projects, contributing US\$ 533 million in funds administered by UNDP. UNDP works closely with the GEF Secretariat, the GEF Scientific and Technical Advisory Panel and other GEF agencies to deliver the GEF's Strategic Objectives and Programmes. Other financiers of projects include the German funded International Climate Initiative, bilateral agencies, governments and the private sector. In addition, the GEF Small Grants Programme (SGP), implemented by UNDP has established operations in over 120 countries. The SGP has made a total investment in biodiversity management amounting to US\$ 157 million in GEF funds and a further US\$ 224 million in third party co-financing. A number of other UNDP environment programmes also contribute towards biodiversity management, including the Poverty-Environment Initiative, the UN-REDD Programme, UNDP's GEF supported International Waters Programme and initiatives of the Nairobi based Drylands Development Centre.

UNDP works through strategic partnerships mobilized with governments and private sector, non-government organizations (NGOs) and community-based organizations.

UNDP is addressing biodiversity loss through two Signature Programmes:

1 Unleashing the economic potential of Protected Area systems (22% of the Earth's surface area, including indigenous and community conservation areas), so they are effectively managed, are sustainably financed and contribute towards sustainable development.

* Protected areas (PAs) are widely recognized as a cornerstone of biodiversity management and sustainable development. An effectively managed and ecologically representative global network of PAs will be crucial in sustaining biodiversity. While individual differences exist between countries and regions, two general deficiencies in PA systems can be characterized by, namely, weak management effectiveness in addressing threats to biodiversity, and weak financial sustainability. Furthermore, the global PA estate is not representative of all ecosystems and some ecosystems such as marine environments and grasslands are significantly under-represented as a proportion of their total area.

UNDP's Strategy

UNDP's strategy is to address these gaps through country-specific interventions that strengthen policies, institutions and staff capacities, and leverage necessary finance.

Overall Results

128 new PAs covering 11.1 million hectares have been established between 2005 and 2010. An additional 197 new PAs covering 4.2 million hectares are in the process of being established. UNDP has also assisted countries to establish the governance frameworks needed to strengthen PA management more broadly. The economic potential of PAs is being harnessed by promoting sustainable tourism, the sustainable harvest of natural resources and by developing markets for ecosystem services. Such work is strengthening 453 existing PAs covering 85.2 million hectares.

2 Mainstreaming biodiversity management objectives into economic sector activities, to ensure production processes maintain biodiversity and ecosystem services that sustain human welfare.

* Most biodiversity in the world resides outside PAs in lands dedicated to various economic production activities, including agriculture, forestry, fisheries, mining and tourism. The integration, or 'mainstreaming', of biodiversity-friendly objectives into these production sectors constitutes a key opportunity for reducing biodiversity loss. If these industries see biodiversity maintenance as a negative balance sheet item, then these ecosystems will likely be transformed and their biodiversity lost.

UNDP's Strategy

Key mainstreaming activities in the biodiversity portfolio include interventions that aim to influence the policy framework governing production sectors, as well as interventions at the level of institutions designed to enhance their capacity to address biodiversity management needs in economic sectors.

Overall Results

UNDP is assisting 50 countries to mainstream biodiversity management objectives, targeting 18 economic sectors. These sectors include agriculture, animal husbandry/livestock, fisheries, forestry, mining, and travel/tourism. Investments to encourage more biodiversity-friendly practices in these sectors have resulted in a growth in the market for many biodiversity-based products, such as medicinal plants. In addition, certification systems for biodiversity-based products—including coffee, forestry products, handicrafts, flax oil, mangrove duck eggs, honey and herbal tea—have been supported. Collectively, UNDP initiatives are influencing the manner in which biodiversity is being managed over an area of 375.5 million hectares worldwide.

CONTRIBUTIONS TOWARDS UNDP'S BROADER WORK ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

UNDP's biodiversity management work under the two Signature Programmes for Biodiversity is aligned with the **four key results** of the UNDP strategic priority on Environment and Sustainable Development, as agreed in UNDP's Strategic Plan for 2008-2011. Examples of UNDP's activities are provided below for each of these key results.

1 Environmental Mainstreaming

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Orchids in Syktyvkar zapovednik - Russia:
Dactylorhiza cruenta

Tanzania's forests act as a safety net for the extremely poor, providing them with resources for their subsistence and livelihoods. Studies have shown that 40% 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. Recent economic analyses of the returns from timber harvested in southern Tanzania showed there is considerable scope to increase returns at the community level. UNDP has a number of initiatives in Tanzania, financed by the GEF, UN-REDD Programme, International Climate Initiative and UNDP core funds to strengthen forest management. This work aims, amongst other things, at setting up joint forest management systems with local communities and ensuring that a larger share of the income from forest resource harvests accrues to these communities.

The UNDP-UNEP Poverty-Environment Initiative (PEI) is helping countries to mainstream poverty-environmental linkages into national development planning. Following a successful pilot phase in nine countries in Africa and Asia, 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 Drylands Development Centre is working to maintain ecological resilience in the world's drylands. Over 40% of the earth's surface is made up of drylands, which are home to an estimated 2.3 billion people, including almost half of the world's poor. The Drylands 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 drylands management issues into national development policy and planning; reducing the vulnerability of poor populations to climatic shocks; and improving governance of natural resources.



3

Climate Change Adaptation and Mitigation



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African Wild Dog, one of the world's most endangered large carnivores.

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 loss and degradation have the potential to emit greenhouse gases that, according to different estimates, 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 pollution has cost US\$ 1.4 billion in 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 hectares 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 costs.

The boreal forests of Kazakhstan represent an irreplaceable 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 PAs in the Altai Sayan Mountains, recognizing that PAs provide a proven approach 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 fires that are expected to occur as a result of climate change.

The UN-REDD Programme, a joint initiative of UNDP, FAO and UNEP, with seed funding provided by the Government of Norway, 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 emissions.





Tsessebe and Plains Zebra, Savuti Channel, Botswana

Additional information on UNDP's work on biodiversity management may be downloaded from UNDP's web site: www.undp.org

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