

Financing the Stewardship of Global Biodiversity



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A stronger GEF will advance our collective goal to protect the world's resources for future generations.

FOREWORD: STEWARDSHIP OF GLOBAL BIODIVERSITY NOW AND INTO THE FUTURE



Monique Barbut, CEO and Chairperson

The rate of global biodiversity loss, as measured by threats to species, is fast approaching between 100 and 1,000 times the rates previously observed in the geologic record. The recently completed Millennium Ecosystem Assessment, which was funded by the GEF, determined that 60 percent of the planet's 24 main ecosystem services are being unsustainably degraded to meet rapidly growing human demands for food, fresh water, timber, fiber and fuel. Addressing the challenge of reversing this unprecedented loss of biodiversity and degradation of ecosystems, while at the same time meeting increasing demands for services, will involve significant changes in policies, institutions and practices.

This daunting challenge is at the heart of GEF's mission. The Global Environment Facility was established as the financial instrument to deal with the additional cost of incorporating global environmental benefits into sustainable economic development. The GEF enjoys the privilege of being the financial mechanism of the Conventions on Biological Diversity and Climate Change. To a large extent, the GEF represents the initial response mechanism of the global community, which is setting in motion the actions that are needed to start reversing the negative trends in biodiversity and ecosystem services provision. Protected areas are one example. Protected area systems represent the first line of defense for threatened species, habitats and ecosystems. GEF has been the largest investor in the creation and adequate management of protected areas around

the world – more than 1.6 billion of GEF money plus \$4.15 billion in co-financing has been directed to 1,600 protected areas, spanning 360 million hectares of land. At the same time, while off to a good start, many important gaps remain in the protected area systems, and representative samples of many globally important ecosystems have not yet been secured.

The GEF has also pioneered the funding of market-based mechanisms that reward good stewardship of natural resources, by promoting the concept of Payments for Ecosystem Services (PES). Through a PES project, the biodiversity-rich nation of Costa Rica went from having the highest deforestation rate in Latin America to having the highest natural reforestation rate among all tropical countries. GEF has funded nearly 30 PES projects, but these gains too are not enough. We face countless other examples where the absence or imperfection of market prices continue to damage ecosystems and promote biodiversity loss.

The GEF is making strides in funding the mainstreaming of biodiversity into productive systems, particularly in landscapes dedicated to food production and other agricultural commodities. These pioneering efforts are involving the private sector, including major agribusiness interests, in solutions that can conciliate economic output and natural resources flows. But such examples continue to belong mostly in the "innovation" category, and have not permeated the mainstream of global commodity production. The GEF is also striving to deliver on the Convention's objective of promoting

access and benefit sharing from the use of genetic resources, and associated traditional knowledge. But we are still lacking an international regime of access and benefit sharing, and until one is in place, progress in this area will continue to lag behind the needs.

This publication provides an account of GEF's significant record to date in biodiversity. There has been progress in many areas, and the CBD has guided our work by building a global agenda for action. Today, GEF's influence is to be found in many hundreds of projects in more than 155 nations. Yet we have not achieved the scale necessary for effective biodiversity conservation, nor have we captured the world's attention to the plight of ecosystems in the way that the international community is now focused on climate change.

Looking forward to these needs, I have worked with our council to reform the GEF as a more accessible, equitable and flexible instrument in order to respond to a more demanding set of challenges, clients and stakeholders, and to make better use of the emerging opportunities. For example, through new programmatic approaches that go beyond isolated projects, GEF's Tropical Forest Account initiative is investing in programs in high priority tropical forests in the Amazon, Congo and New Guinea that are designed to achieve multiple benefits in biodiversity, climate change and human well-being. A strengthened and better resourced GEF could become the meeting place for many more coordinated efforts that move promising models to a new scale.

At the end of the day, if we truly want to foster a level of innovation and scale commensurate with the necessary results, we should look to increase GEF's resources. A stronger GEF will conspire to advance our collective goal to protect the world's resources for future generations. Building on our strengths, while always being mindful of our limitations, I will continue to push GEF to become a much bigger "tent" for the global community. By establishing mutually rewarding partnerships and being creative in the ways in which we raise and employ funds, we will, no doubt, make measurable progress in building a sustainable future for biodiversity and human societies.

KEY ACCOMPLISHMENTS OF THE GEF IN CONSERVING GLOBAL BIODIVERSITY

- The GEF biodiversity focal area program has provided approximately \$2.3 billion in grants, and leveraged an additional \$5.36 billion in co-financing, in support of 790 projects in more than 155 countries.
- The GEF is the largest funding mechanism for protected areas worldwide. GEF has invested in over 1,600 protected areas, covering more than 360 million hectares, an area equivalent to Greenland and Mongolia put together. The GEF has provided more than \$1.56 billion to fund protected areas, leveraging an additional \$4.15 billion in co-financing from project partners.
- During GEF-3, 2003-2006, GEF projects supported:
 - 41 countries to strengthen their protected area systems;
 - 566 protected areas (137,234,149 hectares);
 - 63 new protected areas (20,004,213 hectares);
 - 10 World Heritage Sites (5,868,817 hectares);
 - 47 high priority ecosystems for biodiversity globally (41,314,416 hectares);
 - 32 Biosphere Reserves (26,389,842 hectares); and
 - 40 Ramsar sites (3,060,447 hectares).
- The GEF leads the world in establishing financing mechanisms to sustainably finance and operate national protected area systems in developing countries. It has supported more than 90 projects that involve conservation trust funds, payment for ecosystem services schemes, revolving funds, private sector and village funds, and other innovative financial mechanisms to provide steady, reliable funding for protected area management and biodiversity conservation in developing countries.
- The GEF is recognized as a pioneer in supporting more than 26 conservation trust funds worldwide, investing more than \$300 million in total.
- GEF's Payment for Ecosystem Services (PES) portfolio includes more than 30 projects with explicit PES components. Investments have been made in the development of national systems of PES, regional or local schemes with investments from the private sector, and private-public partnerships.

KEY ACCOMPLISHMENTS OF THE GEF IN CONSERVING GLOBAL BIODIVERSITY , CONTINUED

- The GEF is recognized as the first provider of capacity building in the area of biosafety, where the GEF has invested more than \$75 million, and leveraged more than \$50 million.
- The GEF has supported the development of National Biosafety Frameworks in 122 countries, contributing to the rapid ratification by countries of the Cartagena Protocol on Biosafety (CPB), and has built the capacity for the countries' effective participation in the Biosafety Clearing House mechanism (BCH).
- The GEF has supported 32 countries to effectively implement their National Biosafety Frameworks and the CPB.
- The GEF has developed strong partnerships with civil society organizations, including non-governmental organizations (NGOs) and indigenous and local communities, through its biodiversity program. The GEF Small Grants Programme has provided small grants to more than 5,230 biodiversity projects proposed by NGOs and community-based organizations in 101 countries, with a total GEF funding of \$117 million. The Critical Ecosystem Partnership Fund (CEPF) is another GEF partnership mechanism, with a program budget of more than \$125 million, that has reached out to more than 1,000 civil society organizations in 33 countries to help conserve the world's most important biodiversity hotspots.

PREAMBLE



Marina Silva, Brazilian Minister of the Environment

The tide for the global environment turned last year, when the consciousness of the international community crystallized around the gravity of global warming. This realization was followed by the hope for early action emerging from the Bali Conference negotiations. Unfortunately, the loss of biodiversity has not yet enjoyed a comparable degree of attention and commitment. The Convention on Biological Diversity is playing a vital role for the international community by constructing a wide-reaching agenda to deal with the challenges of conserving biodiversity and securing its sustainable use. At the same time, it is worth noting that the issues of access and benefit sharing deriving from the use of genetic resources and associated traditional knowledge is falling behind, requiring renewed focus.

One of the points of consensus emerging from COP-8 in Curitiba, Brazil, is that we cannot afford to wait any longer to implement the decisions of the Convention in concrete terms. Beyond pilot projects, we now need to gain scale, mainstreaming biodiversity throughout the relevant sectors of society and encouraging a true engagement of all stakeholders. This will require the bringing together of all international efforts and the mobilization of the necessary resources. The GEF, which has had a paramount role in the implementation of the Convention, will soon be challenged to assume an even greater degree of responsibility in order to fulfill its mandate globally.

Brazil has witnessed the vital importance of the GEF for the implementation of national policies that incorporate the protection of biodiversity within the larger framework of sustainable development. However, we are conscious that the magnitude of the challenges is much greater than GEF's ability to address them. The answer by the international community should be to bestow the GEF with the conditions and resources it needs to become an effective instrument commensurate with the scope of the international commitment of the CBD to the protection of global biodiversity. This decision would certainly contribute to sustainable development and to the eradication of poverty. I sincerely hope that the global development community will rise to this challenge.

INTRODUCTION



Ahmed Djoghlaoui, Executive Secretary, Convention on Biological Diversity

A distinct characteristic of the Rio conventions is undeniably the creation of a dedicated financial mechanism for achieving sustainable development.

The financial mechanism of the Convention on Biological Diversity, operated by the Global Environment Facility (GEF), has assisted eligible countries to implement their commitments for achieving the objectives of this unique international legal instrument. Considering that most of the biological diversity is located in developing countries, the importance of the GEF to the Convention on Biological Diversity (CBD) remains fundamental.

This publication highlights the achievements of the GEF since its inception, summarizes its current investment strategy, and begins to map the way forward for the next phase of the GEF. Recent reforms at GEF under the able leadership of its Chief Executive Officer (CEO), Mme Monique Barbut, have strengthened GEF's capacity to continue to deliver global conservation outcomes to meet the needs of Parties. These reforms include the provision of quicker access to funding and an improved process of consultation with the Parties to the Convention on Biological Diversity. This renewed effort is timely for the Convention, as it entered a new phase of enhanced implementation following the eighth meeting of the Conference of the Parties, held in Curitiba, Brazil, in March 2006.

The early results of this improved relationship were seen in Paris in July 2007, with a highlevel dialogue between the CEO of GEF and the Parties to the Convention, followed by the first-ever meeting between the GEF

CEO and the Bureau of the Conference of the Parties. This unique event coincided with the launch of a multi-year GEF-funded project to support implementation of the Convention's programme of work on protected areas. This project was the first GEF project specifically designed to assist Parties to implement a work programme of the Convention. This project complements GEF's extensive support to the global protected areas agenda, including \$1.56 billion of GEF grants to fund protected areas and the leveraging of an additional \$4.15 billion in co-financing from project partners, to improve the management of more than 1,600 protected areas.

In May 2008, in Bonn, the Conference of the Parties to the Convention is expected to further harmonize funding decisions with its decisions on programmes of work, by considering for the first time a multi-year guidance to GEF prior to its fifth replenishment. The Parties will also consider a strategy on resource mobilization prepared and expected to be implemented with the support of the GEF. I expect this to further boost the effectiveness of GEF and, as a consequence, of the implementation of the objectives of the Convention, at a time when, more than ever, the international community and its institutions are called upon to confront the twin planetary challenges of climate change and unprecedented biodiversity loss.

In meeting these challenges, I am optimistic that the 190 Parties to the Convention on Biological Diversity will be able to count on the support of a stronger and more responsive GEF in achieving the common goal of meeting the 2010 biodiversity target and goals beyond, and translating into reality the three objectives of the convention on life on Earth.

ABOUT THE GLOBAL ENVIRONMENT FACILITY



The Global Environment Facility (GEF) unites 178 member governments – in partnership with international institutions, nongovernmental organizations (NGOs) and the private sector – to address global environmental issues. An independent financial organization, the GEF provides grants to developing countries and countries with economies in transition for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer and persistent organic pollutants. These projects benefit the global environment, linking local, national and global environmental challenges, and promoting sustainable livelihoods.

Established in 1991, the GEF is today the largest funder of projects to improve the global environment. The GEF has allocated \$7.6 billion, supplemented by more than \$30.6 billion in co-financing, for more than 2,025 projects in more than 165 developing countries and countries with economies in transition. Through its Small Grants Programme (SGP), GEF has also made more than 7,000 small grants directly to nongovernmental and community organizations.

The GEF partnership includes ten agencies: the U.N. Development Programme (UNDP); the U.N. Environment Programme (UNEP); the World Bank; the U.N. Food and Agriculture Organization (FAO); the U.N. Industrial Development Organization (UNIDO); the African Development Bank (AfDB); the Asian Development Bank (ADB); the European Bank for Reconstruction and Development (EBRD); the Inter-American Development Bank (IDB); and the International Fund for Agricultural Development (IFAD). The Scientific and Technical Advisory Panel (STAP) provides technical and scientific advice on GEF's policies and projects.



section

GEF Support to Biodiversity Conservation: Background and Context

The State of Biodiversity

BIODIVERSITY IS DEFINED by the CBD as “the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems.”¹ As such, biodiversity is life itself, but it also supports all life on the planet, and its functions are responsible for maintaining the chemical balances that provide food, water and materials to human societies. >>





Biodiversity is under heavy threat and its loss is considered one of the most critical current challenges to humankind. Of all environmental ills, biodiversity loss is the only one likely to be irreversible. Precise estimates of the magnitude of this loss are unavailable, mostly because of the lack of reliable baseline information at all levels. For example, scientists estimate that only about 1-10 percent of all species that probably exist on the planet have been described. Notwithstanding this lack of baseline data to the nearest order of magnitude, current estimated rates of biodiversity loss are a major cause for alarm.

The IUCN Red List of Threatened Species keeps track of species trends. Currently, out of 41,415 species assessed for their conservation status, 16,306 are considered as threatened with extinction, up from 16,118 the year before. Levels of threat range from 12 percent to 52 percent of all species known within each major species group. Most alarming is that current rates of extinction exceed extinction rates in the fossil record by a factor of up to 1,000 times.²

Biodiversity loss at this scale is threatening the life-support systems that sustain societies and economies. The Millennium Ecosystem Assessment, a major global effort to assess the consequences of ecosystem change for human well-being, and to establish the scientific basis for actions needed to conserve and sustainably use ecosystems, reported that more than 60 percent of the ecosystem services evaluated (15 out of 24) are being degraded or used unsustainably.³ The degradation

of these ecosystems and their functions has serious consequences for life on the planet. Ecosystem loss and degradation further accelerate the loss of species, reduce current and future services to societies, and disproportionately impact poor people.

In short, at the beginning of the third millennium, humankind is witnessing the destruction of life at unparalleled rates, with unknown but likely very severe consequences for the future of human societies and all life on the planet.

The GEF and the Convention on Biological Diversity

The Convention on Biological Diversity (CBD) provides the global policy framework to address biodiversity issues. The CBD also provides the guidance under which the Global Environment Facility (GEF) operates to assist countries in meeting their obligations under the Convention. In other words, the GEF is the financial instrument of the Convention and is the only binding multilateral agreement in this area, with 190 parties. The objectives of the CBD are defined in Article 1 as "...the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding."⁴

1. Convention on Biological Diversity.
2. 2004 IUCN Red List of Threatened Species: A Global Species Assessment. IUCN Species Survival Commission. 2004, Gland.
3. Millennium Ecosystem Assessment 2005, Ecosystems and Human Well-being: Synthesis, Island Press, Washington, DC.
4. Article 1: Objectives.

The relationship between the Conference of the Parties (COP) of the CBD and the GEF is ruled by an MOU.⁵ In accordance with Article 21 of the Convention, the COP determines policy, strategy, program priorities and eligibility criteria for access to and utilization of financial resources available through the financial mechanism, including monitoring and evaluation. In translating the COP guidance to operational policy for implementation, the Secretariat, in consultation with the GEF Agencies, assesses how the guidance can best be implemented. The GEF defines new or strengthened strategic objectives and approaches, modalities, operational criteria, procedures and any other process needed and presents this for Council approval. In applying COP guidance in project operations, the GEF and its Implementing Agencies support country-driven, national priority projects and programs endorsed by relevant GEF focal points (i.e., full-sized and medium-sized projects, small grants programme, enabling activities).

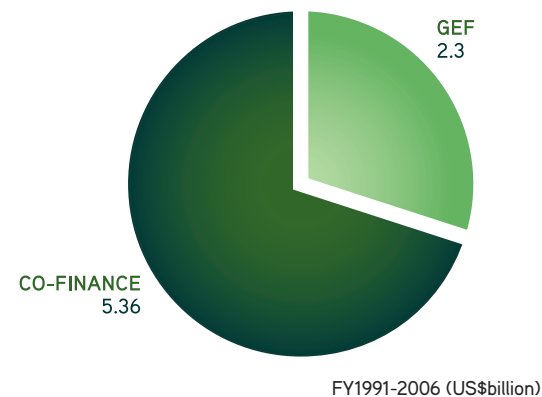
GEF Funding for Biodiversity

Achieving global biodiversity benefits often comes at a cost above national development priorities and national environmental priorities. Thus, the GEF funds the incremental cost of achieving the global benefits of biodiversity conservation and sustainable use. The GEF's biodiversity portfolio has been the largest focal area portfolio in terms of grant money awarded since the Facility began operations. Through fiscal year 2006, the GEF biodiversity portfolio accounted for about 36

percent of total GEF grants to developing countries and those with economies in transition. This was closely followed by the climate change portfolio at about 35 percent. Since 1991, the GEF has provided about \$2.3 billion in grants and leveraged about \$5.36 billion in co-financing in support of about 790 projects that addressed the loss of globally significant biodiversity in more than 155 countries (see Figure 1).

FIGURE 1 >

GEF Biodiversity Investments and Cofinancing



5. Decision III/6: Memorandum of Understanding between the Conference of the Parties to the Convention on Biological Diversity and the Council of the Global Environment Facility.

The GEF's biodiversity portfolio has been the largest focal area portfolio in terms of grant money awarded since the Facility began operations.





section

Evolution of the Biodiversity Strategy: From GEF Inception to the Present

GEF Operational Strategy and GEF Operational Programs

UNTIL THE FORMULATION of strategic priorities for implementation during GEF-3 (2003-2006), the GEF biodiversity portfolio was built on the GEF Operational Strategy and Operational Programs, as well as the guidance provided to GEF from the COP.⁶ The GEF Operational Strategy defines the ten operational principles for development and implementation of the GEF's work program. The GEF Operational Programs in biodiversity were built on the general Operational Strategy and define, by ecosystem type, specific criteria by which GEF projects were further characterized and evaluated. Earlier implementation of the GEF biodiversity program emphasized eligibility based on fit with one or more of the five biodiversity operational programs (OPs).⁷ »



2



The goals of GEF's biodiversity program are the conservation and sustainable use of biodiversity, the maintenance of the ecosystem goods and services that biodiversity provides to society, and the fair and equitable sharing of the benefits arising from the utilization of genetic resources.

The Formulation of Strategic Priorities in GEF-3

In response to two external evaluations undertaken of the biodiversity program, the Second Program Study of the GEF Biodiversity Program and the Second Overall Performance Study, the GEF developed a strategy for GEF-3 to focus the GEF's investment strategy on four strategic priorities:

1. Strategic Priority One (SP1): Catalyzing the Sustainability of Protected Areas
2. Strategic Priority Two (SP2): Mainstreaming Biodiversity in Production Landscapes/Seascapes and Sectors
3. Strategic Priority Three (SP3): Capacity Building for the Implementation of the UN Convention on Biological Diversity Cartagena Protocol on Biosafety
4. Strategic Priority Four (SP4): Generation and Dissemination of Best Practices for Addressing Current and Emerging Biodiversity Issues.

A main purpose for sharpening the investment focus of GEF resources was to apply scarce GEF resources in a manner that most effectively catalyzes actions to maximize global environmental benefits. The strategic priorities for GEF-3 internalized the most pertinent recommendations that had emerged from the evaluation

exercises and provided a framework for the entire portfolio that:

- Placed greater emphasis on sustainability of results and the potential for replication;
- Moved beyond the current projects-based emphasis, where appropriate, to more strategic approaches that systematically target country enabling environments to address biodiversity conservation over the long term;
- Inserted biodiversity within other sectors by mainstreaming it in the wider sustainable development context and economic sectors;
- Engaged with the private sector more effectively;
- Increased support for CBD objectives on sustainable use and benefit sharing;
- Addressed stakeholder participation more systematically;
- Continued to strengthen the Implementing Agency's (IA) role as brokers in the development agenda within the context of country-driven Poverty Reduction Strategy Papers (PRSPs), Country Assistance Strategies (CAS) and other such tools; and
- Improved dissemination of tools, lessons learned and best practices among broader audiences.

6. See www.thegef.org

7. Arid and semi-arid ecosystems, coastal-marine and freshwater ecosystems, forest ecosystems, mountain ecosystems, and agro-biodiversity.

GEF-4 Biodiversity Strategy

The GEF revised its strategy for GEF-4 (2007-2010)⁸ based on the implementation experience gained during GEF-3 and in response to evolving thinking in the conservation community about the drivers of biodiversity loss. The GEF-funded Millennium Ecosystem Assessment identified the most important direct drivers of biodiversity loss and degradation of ecosystem goods and services as being habitat change, climate change, invasive alien species, overexploitation and pollution.⁹ These drivers are influenced by a series of indirect drivers of change, including demographics, global economic trends, governance, institutions and legal frameworks, science and technology, and cultural and religious values. The biodiversity strategy in GEF-4 addresses a subset of the direct and indirect drivers of biodiversity loss and focuses on the highest leverage opportunities for the GEF to contribute to sustainable biodiversity conservation.

The goals of GEF's biodiversity program are the conservation and sustainable use of biodiversity, the maintenance of the ecosystem goods and services that biodiversity provides to society, and the fair and equitable sharing of the benefits arising from the utilization of genetic resources. To achieve these goals, the GEF-4 strategy encompasses four complementary and mutually reinforcing objectives: 1) improving the sustainability of protected area systems, the most predominant and dedicated land-use globally for biodiversity conservation; 2) mainstreaming biodiversity conservation and sustain-

able use into production sectors that impact biodiversity; 3) safeguarding biodiversity by building country capacity to implement the Cartagena Protocol on Biosafety (CPB) and prevention, control and management of invasive alien species; and 4) capacity building to support the implementation of the Bonn Guidelines on Access to Genetic Resources and Benefit-sharing.¹⁰ Underpinning these responses, GEF will support institutional capacity building and the development of the appropriate policy frameworks to ensure sustainable biodiversity conservation.

The long-term objectives and strategic programs that were redefined for the GEF-4 replenishment period replaced the previous structure of operational programs and strategic priorities and balance the need for continuity in the investment strategy, while focusing more explicitly on specific interventions for sustaining conservation over the long-term. The new structure balances continuity and flexibility and supports the emphasis on results (*see Table 1*).

The strategy is consistent with the integrated approaches to biodiversity conservation and sustainable use promoted by the ecosystem approach, the primary framework for action under the Convention on Biological Diversity (CBD).¹¹ Together, these strategic objectives will make a substantial contribution to implementing most of the Millennium Development Goals, particularly environmental sustainability and poverty reduction, while meeting the priorities identified by the COP of the CBD.

8. The full version of the GEF Biodiversity Strategy for GEF-4 can be found at http://gefweb.org/uploadedFiles/Focal_Areas/Biodiversity/GEF4%20strategy%20BD%20Oct%202007.pdf
9. Millennium Ecosystem Assessment 2005, *Ecosystems and Human Well-being: Synthesis*, Island Press, Washington, DC.
10. A major achievement of the sixth meeting of the Conference of the Parties in 2002 was the adoption of the Bonn guidelines on access to genetic resources and the fair and equitable sharing of the benefits arising from their utilization (see Decision VI/24). These voluntary guidelines are meant to assist Parties, Governments and other stakeholders when establishing legislative, administrative or policy measures on access and benefit-sharing and/or when negotiating contractual arrangements for access and benefit-sharing.
11. Decision CBD COP V/6.

TABLE 1 > Long-term strategic objectives and strategic programs for biodiversity in GEF-4

LONG-TERM STRATEGIC OBJECTIVES	STRATEGIC PROGRAMS
1: TO CATALYZE SUSTAINABILITY OF PROTECTED AREA SYSTEMS	1. Sustainable financing of PA systems at the national level 2. Increasing representation of effectively managed marine PA areas in PA systems 3. Strengthening terrestrial PA networks
2: TO MAINSTREAM BIODIVERSITY IN PRODUCTION LANDSCAPES/ SEASCAPES AND SECTORS	4. Strengthening the policy and regulatory framework for mainstreaming biodiversity 5. Fostering markets for biodiversity goods and services
3: TO SAFEGUARD BIODIVERSITY	6. Building capacity for the implementation of the Cartagena Protocol on Biosafety 7. Prevention, control and management of invasive alien species
4: TO BUILD CAPACITY ON ACCESS AND BENEFIT SHARING	8. Building capacity on access and benefit sharing

A photograph of a man in a savanna environment, shirtless and wearing a loincloth, using a spear-thrower (woomera) to launch a spear. The background is filled with tall, dry grass and sparse trees. The word "section" is overlaid in white text at the bottom right.

section

The GEF Biodiversity Strategy in Action

GEF'S BIODIVERSITY STRATEGY has evolved from focusing solely on site-specific action to complementing project-based interventions with investments that address systemic barriers to sustaining biodiversity conservation over the medium-to-long term. This section briefly summarizes some of the key strategic objectives of the biodiversity strategy for GEF-4 that have received the most investment to date, while highlighting areas of innovation and success in dealing with some key barriers to sustainable biodiversity conservation. These include project and program interventions that improve protected area systems, promote market-based solutions to support the sustainable use of biodiversity, establish and implement biosafety frameworks to safeguard biodiversity, or secure multiple benefits (such as forest conservation, climate change mitigation and sustainable livelihoods) through sustainable forest management. >>



Catalyzing the Sustainability of Protected Area Systems

Background

Protected areas continue to be the main tools for biodiversity conservation within the CBD processes, and for the conservation community as a whole. The bulk of GEF biodiversity funding supports *in situ* conservation, with more than 70 percent of the projects in the GEF's biodiversity portfolio supporting protected area management.¹² As the largest financial supporter for protected areas globally, between 1991 and June 2006, the GEF invested in more than 1,600 protected areas, covering more than 360 million hectares, an area equivalent to Greenland and Mongolia put together. This is close to 20 percent of total land area protected globally.¹³ During the same period, the GEF also provided more than \$1.56 billion to fund protected areas, leveraging an additional \$4.15 billion in co-financing from project partners. In addition, the resources allocated to supporting PA system projects have increased during each successive GEF replenishment cycle. In GEF-4 (2007-2010), approximately \$1 billion has been allocated to the biodiversity program, of which \$450 million is nominally directed to strategic programs supporting the management of protected area systems.

The GEF defines a sustainable protected area system as one that possesses the following characteristics: a) sufficient and predictable revenue, including external funding, available to support protected area management costs; b) coverage of ecologically viable

representative samples of ecosystems; and c) adequate individual, institutional and systemic capacity in place to manage protected areas such that they achieve their management objectives. GEF supports comprehensive interventions that address these three aspects of protected area management in order to catalyze the long-term sustainability of the system.

GEF-4 support to catalyzing sustainable protected area systems is being channeled through three strategic programs: a) sustainable financing of protected area systems at the national level; b) increasing representation of effectively managed national marine protected area networks in protected area systems; and c) strengthening terrestrial protected area networks.

To effectively promote the CBD's objectives, the GEF focuses on systems of protected areas, rather than individual protected areas alone. The focus at the system level includes integrating protected area management within the management of the broader landscape and seascape. This approach acknowledges the important role of ecological corridors for conservation and sustainable use, while enhancing connectivity between protected areas and addressing the need to manage external threats. In this way, protected areas can better fulfill their fundamental conservation objective while contributing to poverty alleviation in rural areas.

12. The Global Environment Facility. 2004. Biodiversity Program Study, GEF- OME.

13. United Nations Environment Programme (UNEP), World Conservation Monitoring Centre (UNEP-WCMC). 2003. United Nations List of Protected Areas, Cambridge, UK. Jointly published by IUCN and UNEP-WCMC.

GEF has invested in over 1,600 protected areas, covering more than 360 million hectares, an area equivalent to Greenland and Mongolia put together. The GEF has provided more than \$1.56 billion to fund protected areas, leveraging an additional \$4.15 billion in co-financing from project partners.



CASE STUDY >

Ensuring a Secure Financial Future for Protected Areas

The first trust fund supported by the GEF was the *Bhutan Trust Fund for Environmental Conservation* (GEF grant: \$10 million, co-finance \$7.57 million) as a mechanism to provide long-term support for protected areas and biodiversity conservation generally. The project received technical support from the World Bank, UNDP, the World Wildlife Fund and other NGOs, as well as additional financial support from European countries.

Revenue flows from the endowment fund are used for long-term financing of recurrent and operational costs for management of protected areas, and for other conservation initiatives. The Bhutan Trust Fund's permanent endowment (approximately \$32 million) generates at least \$1.5 million annually.

The agreement establishing the trust fund included a legal covenant by the Royal Government of Bhutan that it will maintain 60 percent of Bhutan's 4,700,000 hectares under forest cover in perpetuity, totaling 2,820,000 hectares protected. The trust fund has helped finance the conservation and improved management of these forested areas, supporting the development and implementation of protected area management plans; capacity building of practitioners engaged in conservation initiatives; research and biological surveys; institutional support for community-based natural resource management; and environmental education and public awareness.

Conservation trust funds have since been established in Peru, Brazil, Bolivia, Colombia, Mexico, the Eastern Carpathians in Europe, the Cape of Good Hope in South Africa, and the Bwindi and Mgahinga Gorilla Parks in Uganda, among others, with endowment support from the GEF to provide long-term and sustainable support for biodiversity conservation, particularly to manage protected area systems (see Table 2).





The GEF is recognized as a pioneer in supporting more than 26 conservation trust funds worldwide, investing more than \$300 million in total.

Impact and Innovation in Sustainable Financing of Protected Area Systems

The GEF has been supporting developing countries to establish and implement various innovative financial mechanisms. In particular, the GEF is recognized as a pioneer in supporting more than 26 conservation trust funds worldwide, investing more than \$300 million in total. In addition, the GEF has supported the diversification of revenue streams to fund protected area management costs through the use of payments for environmental services (PES), tax incentives and other mechanisms. The following examples provide detail on success stories of GEF support to the creation of sustainable financing for protected area systems around the world.

TABLE 2 > Trust Funds Established with the Support of the GEF

COUNTRY	TRUST FUNDS
ALBANIA	Butrint Conservation Fund
BENIN	International Trust Fund for Biodiversity Conservation
BHUTAN	Trust Fund for Environmental Conservation
BOLIVIA	FUNDESNAF - Bolivian Foundation for the Development of the National System of Protected Areas
BRAZIL	Brazilian Biodiversity Fund (FUNBIO)
COLOMBIA	Colombian National Protected Areas Conservation Trust Fund
COSTA RICA	Trust Fund - Payments for Ecosystem Services
COTE D'IVOIRE	Fund for Financing of Protected Areas
ECUADOR	FAN Ecuador - Ecuador National Environmental Fund
KAZAKHSTAN	Biodiversity Conservation Fund
LAC REGION	MAR Fund - Mesoamerican Reef Fund
MALAWI	Mulanje Conservation Fund
MEXICO	FMCN - Mexican Nature Conservation Fund
PAKISTAN	Valley Conservation Fund
PAPUA NEW GUINEA	Mama Graun Conservation Trust Fund
PERU	National Trust Funds for Protected Areas (PROFONANPE)
RUSSIA	Salmonid Diversity Conservation Fund
RUSSIA	Kamchatka Biodiversity Trust Fund
SOUTH AFRICA	Table Mountain Fund
SRI LANKA	Protected Area Conservation Fund
SURINAME	SCF -Suriname Conservation Fund
TANZANIA	Eastern Arc Mountains Conservation Fund
UGANDA	Mgahinga-Bwindi Impenetrable Forest Conservation Trust
UKRAINE	Foundation for Eastern Carpathian Biodiversity Conservation
VIETNAM	Vietnam Conservation Fund for the Conservation of Wildlife
YEMEN	Socotra Conservation Fund



CASE STUDIES >

Diversifying Revenue Streams for Protected Areas Management

The *Environmental Services Project in Mexico* (GEF grant: \$15 million, co-finance: \$166.8 million), started implementation in 2006 and utilizes payments for ecosystem services to augment and diversify revenue for the management of Mexico's protected area system. The project aims to ensure the provision of environmental services that bring both national benefits (water services) and global benefits (biodiversity conservation and carbon capture). The project protects globally significant forest and mountain ecosystems. All sites for PES schemes overlap with at least two of the following high-priority biodiversity conservation designations: (i) existing Natural Protected Areas; (ii) Priority Terrestrial Ecoregions established by CONABIO; (iii) Important Bird Areas that are vital to the survival of endemic species or for protecting key bird breeding, feeding and migration areas; and (iv) Ramsar Wetlands of International Importance. The project is strengthening the capacity of stakeholders, including the government, community associations and NGOs; establishing sustainable long-term financing mechanisms, including an endowment fund; establishing legal, institutional and financial arrangements to pilot market-based mechanisms for payment for environmental services; documenting links between land-use changes, water services improvements and biodiversity conservation; and defining good practices to replicate, scale up and sustain programs based on PES markets. In addition to those actions, by the end of the project, 200,000 hectares of forests and other natural ecosystems of global biodiversity significance are expected to be under effective management by landowners in the buffer zones of protected areas and the corridors that connect them, including the Mexican portion of the Mesoamerican Biological Corridor.

The project *Effective Management of the National Protected Areas System Project in Zambia* (GEF grant: \$6 million, co-finance: \$36 million) aims to strengthen the enabling frameworks and capacity for managing Zambia's National Protected Areas System. The project is closely linked to Zambia's Poverty Reduction Strategy, which identifies tourism based on the country's wildlife assets to be the second most important growth sector for the country. For example, results from a World Bank/UNDP survey of 1,578 tourists, indicated that willingness to pay an additional tax per visitor could potentially generate more than \$10 million in annual revenues for conservation activities.



Future Challenges and Opportunities

While the size and number of protected areas are rapidly increasing, key discussions among practitioners and decision makers involved in management of protected area systems are focused on how to ensure sustainable financing of these systems. Various studies estimate that the total cost to governments for effective management of the existing protected areas in developing countries ranges from \$1.1 billion to \$2.5 billion a year, with a funding shortfall of between \$1 billion and \$1.7 billion per year.¹⁴ Since the CBD came into force in 1993, the world's protected areas have increased by nearly 100 percent in absolute numbers and by about 60 percent in total area. Yet, for the same period, international financing for biodiversity conservation grew at only about 38 percent.¹⁵

Traditionally, protected areas are funded through government budgetary allocations, bilateral and multilateral agencies, tourism, NGOs and charity organizations. In recent years, increased attention has been given to identifying new and innovative national and international financial mechanisms for protected areas to supplement these traditional sources and diversify revenue streams for protected areas management. A wide range of innovative financial mechanisms with considerable potential to increase revenues and reduce the funding gap has been identified and introduced, including taxation systems, joint implementation, green lotteries and markets, payments for ecosystem services and biodiversity

offsets. Successful pilots of these mechanisms are currently being supported by the GEF, and the GEF will continue to support development and up-scaling of new and innovative mechanisms for financing protected area systems.

14. P. Gutman and S. Davidson. 2008. A Review of Innovative International Financial Mechanisms for Biodiversity Conservation: With a Special Focus on the International Financing of Developing Countries' Protected Areas, WWF-MPO, 5 Jan.

15. *Ibid.*



CASE STUDY >

Protected Areas of the Amazon: *The ARPA Program*

Brazil has established the Protected Areas of the Amazon Program (ARPA) to expand its protected area network in the Amazon, to improve capacity for management, and secure financing for long-term management needs. Implementation of the first phase of the program began in 2003, supported by a GEF grant of \$30 million, which leveraged initial co-financing of \$59 million. The project includes support from the Brazilian government, the Brazilian Biodiversity Fund (FUNBIO), the World Bank, the German Development Bank (KfW), and the World Wildlife Fund (WWF).

During the first phase, ARPA sought to create 18 million hectares in new protected areas (9 million hectares of strict protection PAs and 9 million hectares of sustainable use). The sustainable use protected areas have the goal of conserving biodiversity while at the same time supporting the communities living in them. ARPA will also develop long-term sustainable management tools and mechanisms for effective protection within all Amazonian strict protected areas. As this first phase of the program enters its last year of implementation, the original targets have been exceeded: more than 31 million hectares of protected areas have been created, and an additional 25 areas are being studied for future protected area creation and an endowment fund has been established and capitalized with \$17.9 million. A second phase is currently under design.





THE SMALL GRANTS PROGRAMME

The GEF Small Grants Programme (SGP) was launched in 1992, and is a GEF corporate program implemented by UNDP on behalf of the GEF partnership. The SGP is designed to support grassroots initiatives with community-based organizations (CBOs) and national NGOs, aiming to deliver global environmental benefits through community-based approaches whilst contributing to poverty reduction and local empowerment. Particular attention is paid to sustainability so that all activities are based on good feasibility studies, sound management and replicability.

By the end of its Third Operational Phase in 2007, SGP had supported more than 9,500 projects and strengthened over 7,000 civil society groups in 101 countries across all the GEF focal areas. In the biodiversity focal area, the SGP programming has supported more than 5,230 community based biodiversity projects, totaling US\$117 million which have leveraged an additional US\$81 million in cash co-financing and US\$85 million in in-kind contributions.

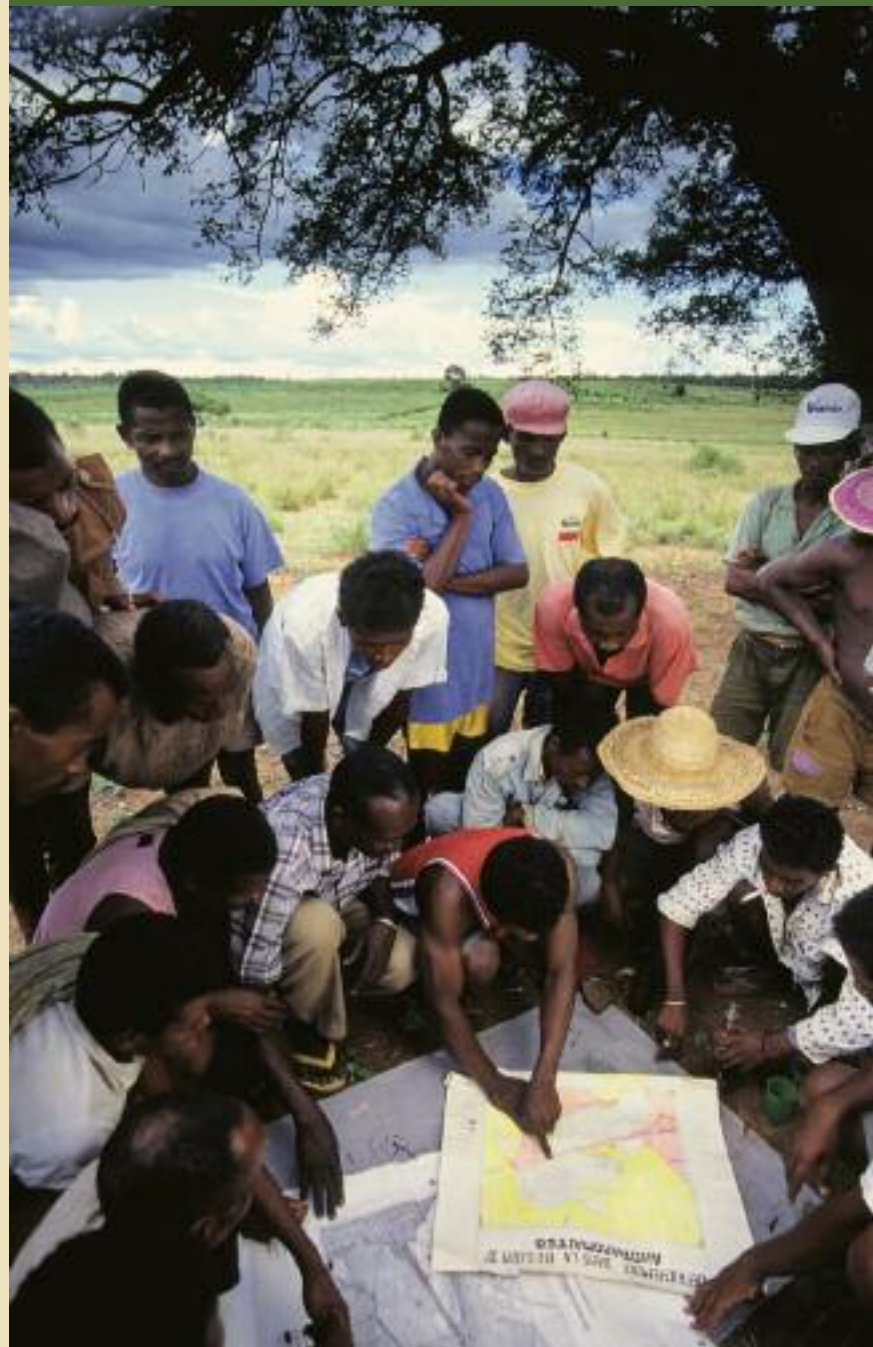
In each country where it operates, SGP has sought to develop and implement tailor-made formats to reach directly to the poor and marginalized in remote regions. At the global level, some 15% of the grant portfolio provides support to indigenous peoples. Capacity development operates at all levels in the SGP. Proposals to the SGP are accepted in national languages, and in some cases are developed with non-literate groups using innovative formats such as participatory video and community theatre in order to facilitate local solutions and build on traditional knowledge.

Some key observations and results from this targeted GEF investment include the following:

- In 2007, the Independent Evaluation of the GEF Evaluation Office found that *"If projects from all the phases are considered together, 90 percent of all SGP project grants reviewed were rated by the evaluation in the satisfactory range... SGP project grants are on target to meet and exceed the benchmark of 75 percent of GEF Projects achieving satisfactory outcome rating that was agreed upon in the GEF-4 replenishment agreement"*.¹⁶
- The Independent Evaluation further found that *"in all 22 country programmes SGP has contributed to the formulation and or implementation of policies. They do so by cultivating relationships with civil society organizations, local, provincial and national governments, academic institutions, other global organizations, and the private sector"*;
- In relation to protected areas, SGP has focused intensive support to strengthening the collaborative management and governance arrangements of 8 World Heritage sites covering 901,809 hectares through the strategic clustering of small 'COMPACT' grants according to carefully prepared conceptual models, site strategies, and partnerships at the landscape level (attracting over US\$7 million in support from the United Nations Foundation);
- Assistance in the first-ever international repatriation of the locally extinct Bongo mountain antelope from captive breeding sites in different US zoos and reinsertion in their native Mt Kenya natural habitat;

16. GEF/ME/C.32/Inf.1 JOINT EVALUATION OF THE SMALL GRANTS PROGRAMME FULL REPORT (Prepared by the GEF Evaluation Office) October 16, 2007

- From the sample of 130 individual projects surveyed by the 2007 Evaluation, some notable achievements of the SGP include: *"In Turkey, an SGP grant resulted in significant reduction of illegal pearl mullet fishing. Pearl mullet is listed as an IUCN Red List and is endemic to Van Lake. The ratio of spawn fishing to winter fishing outside the reproductive period has been reversed. In Ghana the programme has placed 250,000 ha of land outside the gazetted protected forests under effective community management. These areas include globally significant biodiversity areas, important bird areas, biological corridors and traditional protected areas. In Romania several projects are improving the protection of key species (such as the Black Sea Dolphins, White Storks and Golden Eagles), and local reserves / Protected Areas."*
- In Brazil, since 1992 SGP has supported over 250 projects (comprising a GEF investment of some US\$6.50 million) relating to biodiversity from the threatened cerrado biome, including support to over 50 sustainable use supply chains and micro-enterprises from a range of products including golden grass, baru nuts, native fruits and other non-timber forest products. The SGP mobilization of a network of cerrado producers culminated in an investment of 3.50 million euros in the cerrado by the European Commission in 2007, as well as upscaling and replication of the impacts as part of a full-size GEF project on 'Alternatives to soy' by the World Bank.



THE CRITICAL ECOSYSTEM PARTNERSHIP FUND

The Critical Ecosystem Partnership Fund (CEPF) provides grants for nongovernmental organizations (NGOs) and private sector partners to help protect the Earth's biologically richest regions or hotspots. Launched in 2000, the CEPF is a partnership between the Global Environment Facility (GEF), the World Bank, Conservation International, the Government of Japan, and the John D. and Catherine T. MacArthur Foundation. Each partner committed \$25 million to the program, totaling \$125 million for the first phase of the CEPF. Based on positive results from the first phase, the GEF Council has approved \$20 million for the second phase of the program. In 2007, Agence Française de Développement (AFD) joined the program as the sixth partner. Conservation International and the MacArthur Foundation have also committed additional funding for the second phase.

CEPF was established to provide strategic assistance to engage NGOs, community groups and other civil society partners in conserving Earth's biodiversity hotspots. All of CEPF's investments:

- Target hotspots in developing countries for maximum impact;
 - Are guided by region-specific investment strategies developed with stakeholders;
 - Go directly to civil society groups to build this vital constituency for conservation alongside governmental partners;
 - Create working alliances among diverse groups, combining unique capacities and eliminating duplication of efforts; and
 - Achieve tangible results through an expanding network of partners working toward shared conservation goals.
- CEPF has supported more than 1,000 civil society groups in 33 countries in implementing diverse projects to help conserve biodiversity hotspots. Grant recipients range from small farming cooperatives to local and international NGOs. The program's flexible and agile structure and operations have enabled it to support many community groups and fledgling organizations that are often outside the reach of traditional funding mechanisms. Key achievements to date include:
- Implementation of 18 Hotspot strategies, covering 52 countries and territories;
 - Support to 1,200 different groups;
 - \$92 million in committed grants, which have leveraged an additional \$128 million;
 - Improved management of 20 million hectares of protected areas, including creation of more than 9 million hectares of new protected areas;
 - Promotion of sustainable use of biodiversity in production landscapes, through stewardship, improved use and management of natural resources, the reduction or elimination of practices harmful to biodiversity, and the development and adoption of a variety of alternative livelihood opportunities;
 - Strengthened protection of critical biological corridors, through improved land-use planning, collaboration with the private sector, and development of supportive policy and legislative frameworks; and
 - Successful piloting of new financing mechanisms, including payments for ecosystem services, and successful interventions by civil society to influence development decisions.

Between 2003-2006,
GEF projects supported
mainstreaming of biodiversity
through investments

in the following sectors:

- Agriculture: 43 projects
- Fisheries: 21 projects
- Forestry: 26 projects
- Tourism: 23 projects
- Mining: 3 projects

Mainstreaming Biodiversity into Production Landscapes and Seascapes

Background

Over the long term, conservation and sustainable use of biodiversity will require managing landscape and seascape mosaics that include both protected areas and a variety of other land uses, especially as human pressure continues to increase. Therefore, parallel to improving the sustainability of protected area systems, GEF will help integrate the sustainable use of biodiversity into the sectors of the economy that strongly impact biodiversity outside of protected areas – often referred to as “mainstreaming.” As noted by the Millennium Ecosystem Assessment, the sustainable use of biodiversity will only be achieved once it is mainstreamed within production sectors.

Through two strategic programs, the GEF supports efforts to remove the barriers that prevent public and private sector actors from mainstreaming biodiversity. The first strategic program, “Strengthening the Policy and Regulatory Framework for Mainstreaming Biodiversity,” supports the development of the policy and regulatory frameworks that promote and reward mainstreaming and builds the necessary institutional capacity. The second strategic program, “Fostering Markets for Biodiversity Goods and Services,” catalyzes markets for biodiversity goods and services and promotes voluntary environmental certification to generate biodiversity gains through market mechanisms, including payments for ecosystem services (PES) programs.

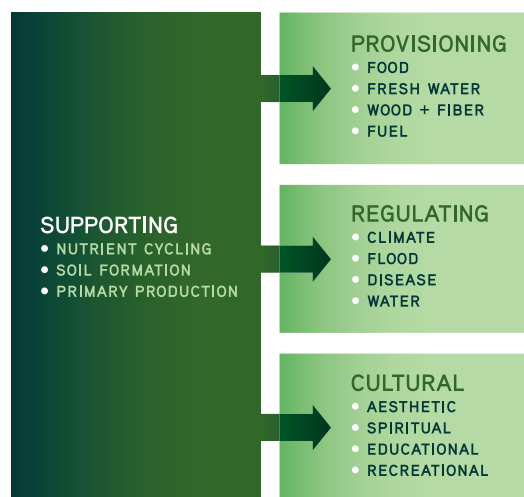


GEF's Payment for Ecosystem Services (PES) portfolio includes more than 30 projects with explicit PES components.

Impact and Innovation in Payments for Ecosystem Services

The Millennium Ecosystem Assessment defines ecosystem services as “the benefits people obtain from ecosystems.”¹⁷ Humans are fundamentally dependent on the flow of ecosystem services. The Millennium Ecosystem Assessment uses a “functional” classification of PES, organizing ecosystem services into the following categories: supporting, provisioning, regulating and cultural (see Figure 2).

FIGURE 2 >
Ecosystem Services



Other schemes have classified ecosystem services based on geographical scale (local, regional, global), value to society (direct and indirect), the type of ecosystem providing the service (forest, coral reef, wetland, etc.), or the function they provide (production of goods, regeneration processes, stabilizing processes, life-fulfilling functions).¹⁸

PES provides a promising area for GEF investment. The GEF is building on experience gained in GEF-3 and continues to support the design and implementation of PES schemes to compensate resource managers for off-site ecological benefits. This includes support to identify potential opportunities for PES schemes that incorporate private sector actors on the demand side.

The definition of “payments for ecosystem services” varies widely, from narrow market-based definitions with emphasis on direct transactions between providers and beneficiaries (sometimes with specifications on the nature and conditions of the transaction between buyers and sellers), to wide schemes where those who benefit from ecosystem services pay those who provide those services. It is important to remember that PES schemes are vehicles to assist in the financial sustainability of the provision of goods and services from nature, rather than a goal in and of itself.

17. Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC.

18. Huberman, D. and T. Leipprand. 2006. *Developing International Payments for Ecosystem Services: A technical discussion*. Economics and Trade Branch, UNEP, Geneva, Switzerland, August 2006.

CASE STUDY >

The Costa Rica PES Program: Support to Private Suppliers of Ecosystem Services

The *Costa Rica PES program* (GEF grant: \$8 million, co-finance: \$33 million), initiated in 1997, was one of the first countrywide PES programs in the world. Changes to the Forest Law of 1996 created a legal framework to pay landowners for the provision of four types of ecosystem services: carbon, water, biodiversity and scenic beauty. The funds used to pay for the ecosystem services come from a fuel tax (80 percent of funds), forestry tax revenues, revenues from a World Bank Loan, and funds from the governments of Germany and Norway as well as the GEF. Payments to providers have ranged between \$40 to \$45/hectare/year.

Costa Rica's PES program can be considered a success in terms of forest conservation and restoration but the original design did not specifically target priority conservation areas, a situation that was significantly improved through the first GEF grant that supported the PES program. The original design also favored the participation of medium and large landowners. Subsequently, reduced transaction costs have led to a significant increase in participation of poor farmers, indigenous people and women. Nevertheless, owners of very small parcels are still better off engaging in agriculture than taking payments to keep their land forested. A challenge for all national-level PES schemes is to demonstrate both the efficiency of the investments (opportunity costs) and the generation of environmental benefits (both water and biodiversity) while addressing the potential "spill-over" effects (increases in deforestation in areas not subject to payments).

In terms of sustainability, the Costa Rica PES program is based on a fuel tax and a conservation fee from water tariffs that was recently introduced into the legislation. However, because taxes as a source of funding for a PES scheme are subject to changes in policy and regulation, these sources may not be sustainable over the long term. In addition, another key challenge for the future of the Costa Rica National PES scheme is to better engage the private sector. The follow-up GEF project "Mainstreaming Market Based Instruments for Environmental Management Projects" will help address these two issues. The project aims to increase the area under PES contracts, set up and capitalize a Biodiversity Conservation Fund, increase private payments for watershed related services and carbon sequestration, and enhance the participation of smallholder ecosystem service providers.



The GEF has taken a pragmatic, wide-angle approach to supporting PES schemes. Overall, PES for GEF has involved arrangements between buyers and sellers of environmental goods and services, where those that pay are fully aware of what they are paying for, and those that sell proactively and deliberately engage in resource use practices aimed at securing the provision of the services.

GEF's PES portfolio includes more than 30 projects with explicit PES components, with emphasis in Latin America. Investments have been made in the development of national systems of PES, regional or local schemes with investments from the private sector, and public-private partnerships.

Future Challenges and Opportunities

PES is seen by many as the next big opportunity to acquire the necessary financial resources to conserve and sustainably use biodiversity in perpetuity. Two main tracks have been developed and implemented to establish PES schemes: national systems and market-based schemes. Some countries are interested in developing national systems of PES, based on the successful experiences of, for instance, Costa Rica and Mexico. These national schemes allow internalizing the ecosystem services into the national economies. Many of these are likely to provide significant funds in biodiversity-rich developing countries. Because the funding for these programs comes mainly from taxes (i.e. on water and fuel), this gives them relative stability in the short- and medium term. In the long term, these schemes are at some risk, as the policy on taxes is subject to changes when government changes. Market-based PES schemes are defined as those in which there are buyers and sellers that are linked by a voluntary agreement to deliver the good or service in exchange for a payment.

Although there are a number of successful pilot projects for the "big four" environmental services (carbon, water, biodiversity and scenic beauty), there are also a number of issues that need to be clarified before scaling-up can take place. For carbon, the possibilities of funding through Reduction Emissions from Deforestation and Degradation (REDD) would require an agreement at the political level (post-Kyoto) as well as on the methodologies, including baselines and accounting systems. One

important challenge from the biodiversity point of view is that global carbon markets allow targeting not only high biomass ecosystems, but also biodiversity-rich areas. For water, increased deforestation and desertification is likely to result in increasing awareness of the problem and the potential solutions at the local level (watershed scale). A big challenge for payments for water is to be able to develop and implement trans-boundary schemes in large watersheds. Paying for biodiversity continues to be the greatest challenge. In most cases, biodiversity is being protected via carbon and water PES schemes. Only areas that support charismatic fauna and flora are likely to benefit now and in the future from eco-tourism, assuming that funds are properly re-invested in the management of national parks and other areas in a Protected Area Systems. Thus, PES may have an important role to play in channeling resources to these areas above and beyond the revenues generated by tourism. Going forward, GEF will continue to provide support to PES while extracting lessons learned to enhance the long-term sustainability of these approaches.





CASE STUDY >

Regional Integrated Silvo-pastoral Ecosystem Management Project

The *Regional Integrated Silvo-pastoral Ecosystem Management Project (Colombia, Costa Rica, Nicaragua)* (GEF grant: \$4.5 million, co-finance: \$3.5 million), aims at improving ecosystem functioning of degraded pasture lands through the development of more intensive silvo-pastoral systems that generate global environmental benefits and provide local socio-economic benefits.

The project paid ranchers for changes in land use, away from current ranching and toward silvo-pastoral practices, using different combinations of livestock, fodder crops and woody perennials. The project has resulted in an increase in biodiversity (especially of birds), carbon sequestration (in trees and via reduction in fertilizer usage) and water quality through farmer adoption of silvo-pastoral practices. The project has produced numerous field manuals to guide farmers and extension agents in the implementation of silvo-pastoral practices. It also has a strong evaluation component with detailed baseline information and monitoring of control groups, carbon sequestration and biodiversity. By late 2006, after three years of operation, there were approximately 400 landowners and some 2,000 hectares enrolled in the project.

The project has produced a series of very valuable lessons on sustainability. First, in cases where the silvo-pastoral practices are highly profitable, ranchers adopted the silvo-pastoral model and have continued with it even after the PES scheme ended, because maintaining this land use is more profitable than going back to ranching in degraded pastures. Although some have argued that this initial financial assistance could be delivered as credits, it is also true that the initial costs associated with these new practices have long deterred ranchers from adopting the systems themselves in the first place, unless detailed financial information is offered. This project can certainly provide this information for future projects. Second, some practices that are very attractive for financial reasons are not necessarily very beneficial to biodiversity. In these cases, the farmers would continue the new practices but without generating much in the way of global environmental benefits. Third, some landowners switched back to ranching on degraded lands because the PES scheme stopped and ranching was still profitable using conventional methods.





WORKING TOGETHER WITH INDIGENOUS AND LOCAL COMMUNITIES

Significant populations of indigenous and local communities live in areas where the vast majority of the world's globally significant biodiversity is found. According to a recent study by the World Resources Institute, it is estimated that traditional indigenous territories encompass up to 22 percent of the world's land surface and 80 percent of the planet's biodiversity. Particularly, many protected areas of the world are found within or overlap with the lands, territories and resources of indigenous peoples. This convergence of significant biodiversity areas and indigenous territories presents an enormous opportunity as well as a challenge to expand efforts to conserve biodiversity in protected areas and in the larger production landscape. Indigenous communities have preserved and maintained knowledge, innovations and practices that are highly relevant for the conservation and sustainable use of biodiversity. They have also made a substantial contribution to the conservation and sustainable use of globally significant biological resources, based on their traditional knowledge. It is important to ensure that the rights, interests and livelihoods of indigenous peoples are taken into account to achieve conservation and sustainable use of biodiversity.

The GEF has been working closely with indigenous and local communities since its inception, recognizing that effective public involvement of indigenous and local communities is essential to the success of its projects. The CBD also emphasizes the importance of working with indigenous peoples to respect, preserve and maintain traditional knowledge relevant for the conservation and sustainable use of biodiversity. Successful implementation of conservation projects affecting indigenous and local communities requires appropriate participation of and collaboration with these communities.

As of June 2006, the GEF has supported more than 102 biodiversity conservation projects that address issues involving indigenous peoples worldwide. The GEF Public Involvement Policy notes that indigenous and local communities are to be involved in conserva-

tion interventions from the early stages of project formulation through project implementation and monitoring. Many GEF projects that involve indigenous communities focus on capacity-building and awareness-raising, policy and institutional development, promoting sustainable economic opportunities, and practical and innovative conservation actions in protected areas and buffer zones, as well as in the larger production landscape. The GEF-supported project on the Indigenous People's Network for Change supports indigenous and local communities to increase their awareness of and effective participation in the CBD and GEF processes. The project is also developing communication and information mechanisms that promote an effective exchange of information.

Indigenous Peoples and Protected Areas

The *Upper Mustang Biodiversity Project in Nepal* (GEF grant: \$727,000, co-finance: \$1.275 million) supports biodiversity conservation at a globally unique site located in one of the most remote corners of the globe, which was closed to outsiders until the early 1990s. The project is located in the mountains of the Central and Eastern Himalayas, a globally important region for biodiversity. The Upper Mustang is under active consideration for nomination as a World Heritage Site. The site was added to the Annapurna Conservation Area Project (ACAP) - a multiple-use protected area managed by a national NGO, the King Mahendra Trust for Nature Conservation. A key element of ACAP has been active participation by the indigenous people and user-groups in decision-making. An important part of the project design was to link biodiversity with cultural conservation. The project promoted excellent social mobilization and indigenous community involvement. Key project outputs included: an agreement with the government to reinvest 60 percent of tourist entry fees into conservation and social development activities; establishment of an effective Community Trust Fund; development of a GIS; development of an integrated management plan; and outstanding restoration of cultural heritage.

CASE STUDY >

GEF Support to Implementation of the Cartagena Protocol

The global project *Development of National Biosafety Frameworks* has provided support to 122 countries for developing their NBFs and for regional activities to promote regional collaboration and exchange. To date, 98 countries have completed National Biosafety Frameworks. GEF has invested \$32 million to support this project and leveraged an additional \$15 in co-financing.

A second global project on *Building the Capacity for the Effective Participation of Parties in the Biosafety Clearing House (BCH)*, has assisted 119 countries to participate in the BCH mechanism. GEF has invested \$12 million to support this project and has leveraged an additional \$1.4 million in co-financing.

Support for full implementation of the CPB has been provided to 32 more advanced countries, through national and regional projects for the implementation of their biosafety frameworks and the CPB. GEF has invested \$30.5 million to support these projects and leveraged an additional \$30 million in co-financing.







The GEF has supported the development of National Biosafety Frameworks in 122 countries, contributing to the rapid ratification by countries of the Cartagena Protocol on Biosafety (CPB)

Implementing the Cartagena Protocol

Background

Countries require management systems and frameworks to effectively manage living modified organisms that may have adverse effects or pose a risk to biodiversity. GEF will continue to help build country capacity to implement the Cartagena Protocol on Biosafety (CPB).

GEF's strategy to build capacity to implement the CPB takes into account the guidance from the Protocol and lessons and experiences emerging from the GEF biosafety portfolio. Priority will be given to activities for the implementation of the CPB that are specified in the COP guidance to the GEF with respect to biosafety, in particular the key elements in the *Updated Action Plan for Building Capacities for the Effective Implementation of the CPB*, agreed to at the third COP serving as the Meeting of the Parties to the CPB (COP-MOP-3), and identified in a country's stock-taking analysis.

Impact and Innovation in Developing National Biosafety Frameworks

The use of the tools from modern biotechnology has proven to be a very contentious issue. There is little disagreement that the potential benefits of biotechnological applications can be offset by potential environmental and human health risks. These, in turn, must be addressed through the establishment of effective biosafety frameworks.

The GEF began supporting biosafety capacity building in 1997, in order to help countries get ready for the entry into force of the Cartagena Protocol, and has increased its support since the entry into force of the CPB in 2003. GEF biosafety projects have contributed to a speedier ratification of the CPB by many countries than would otherwise have been the case (80 percent of supported countries with completed National Biosafety Frameworks have ratified the Protocol).

Future Challenges and Opportunities

During GEF-4, and building upon the prior support to biosafety, GEF will increasingly focus on capacity building to assist in the implementation of NBFs and the implementation of the Cartagena Protocol at national, sub-regional and regional levels. Priority will be given to activities that support the implementation of the CPB, in particular the key elements in the Updated Action Plan for Building Capacities for the Effective Implementation of the CPB, agreed at the third Conference of the Parties-Meeting of the Parties. A stock-taking assessment of participating countries will be a first step in project design and will guarantee tailored support to demonstrated country needs.

In addition to national, sub-regional and regional proposals, the Biosafety Program will support multi-country issue-specific projects. Issues that are potential candidates for this kind of approach are documentation needs and labeling, risk assessment and risk management, decision-making systems, monitoring for environmental impact, socio-economic considerations and LMO detection.

Through the Biosafety Program, the GEF will help countries put into effect national and regional biosafety decision-making systems and tools and related institutional arrangements, including adequate facilities that contribute to the safe use of biotechnology in conformity with the Cartagena Protocol on Biosafety.

Learning from experience, the Biosafety Program will pay special attention to:

- In-country coordination and stakeholder involvement;
- Involvement of a broad range of GEF Agencies;
- Awareness raising, public participation and information sharing;
- Long-term training in risk assessment and risk management;
- Sustainability of the capacity built; and
- Coordination of capacity building efforts at the international level.



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Seeking Triple Benefits Through Sustainable Forest Management in Tropical Forests

Background

The GEF has developed a Sustainable Forest Management (SFM) program, which will run through the course of GEF-4, and hopefully beyond the current replenishment cycle, depending on resource availability. As one of the evolving programmatic approaches to the delivery of higher impact results by the GEF, the SFM program is allowing resources from multiple thematic (focal) areas to be invested in a more structured and focused way, by addressing threats to forest ecosystems arising from a variety of sources. Likewise, the SFM program supports interventions that generate multiple benefits in biodiversity, climate change (via reduced emissions from deforestation) and sustainable land management (and livelihoods) simultaneously.

The SFM program is evolving as a multi-disciplinary initiative, drawing on knowledge, experiences and funding from the GEF focal areas of biodiversity, climate change and land degradation. More than \$44 million has already been invested during the first six months of the program. Thus, the GEF SFM program is a functioning, innovative leveraging mechanism that provides incentives for countries to direct part of the resources allocated to them under the GEF Resource Allocation Framework to SFM.

Based on this auspicious beginning, the GEF has decided to create a new initiative under its SFM program designed to scale up its investments in high biodiversity, high forest countries. The GEF has historically valued the role of tropical forest wilderness areas and has invested a substantial amount of GEF biodiversity resources accordingly, with a major focus on forest protected areas. In addition to conserving global biodiversity, and providing spiritual and cultural havens for local and remote populations, these forest areas are among the largest and most important providers of ecosystem services on Earth and are fundamental to maintaining our planet's long-term health and stability. They are also essential for sustaining rural livelihoods.

Tropical deforestation is responsible for more than 20 percent of global CO₂ emissions.¹⁹ New research suggests that slowing tropical deforestation may play a much larger role in mitigating climate change than previously believed.²⁰ Carbon emissions from tropical deforestation are now expected to increase atmospheric CO₂ concentration by between 29 and 129 p.p.m. within 100 years, far above prior estimates.²¹ And yet, countries with high forest cover and low rates of deforestation are at risk of being omitted from a new international climate policy framework on reducing emissions from deforestation.²²

The fate of tropical forests is also intimately tied to the future of biodiversity, as these forests harbor over one half of all global biodiversity.²³ Habitat loss threatens 74



percent of endangered mammals, 44 percent of endangered birds, 57 percent of endangered amphibians, and 67 percent of endangered reptiles.²⁴

As forest resources dwindle and the agricultural frontier expands globally, pressure to convert tropical forests is increasing. Tropical forests have already been affected by large-scale degradation and fragmentation; only 43 percent of the extent of original forest cover remains.²⁵ Preventing tropical deforestation is fundamental to poverty reduction strategies, as these forest ecosystems ensure the long-term provision of environmental goods and services essential for rural livelihoods.

Catalyzing Sustainable Tropical Forest Management

The GEF SFM Tropical Forest Account is starting to provide incentives for countries to direct part of their resources from the Resource Allocation Framework to SFM. The Tropical Forest Account (TFA) advances the three focal-area GEF strategies by fostering a convergence of investments in high tropical forest cover regions.

Three regions of large, intact, tropical forest (Amazonia, Congo Basin and New Guinea and Borneo) are defined as the initial targets for the TFA. The 17 countries within the target region house 54 percent of tropical forest cover, and contain 68 percent of tropical forest carbon. Each of these regions has over

8 million hectares of wet broadleaf forest and is over 70 percent intact. The three regions identified here accord with other global biodiversity prioritization studies. These three regions, including Borneo, are the only tropical regions containing forests classified as “frontier forests under low or no threat” and “10 percent wildest moist broadleaf forests.” Additionally, a recent analysis has found greatest spatial concurrence between biodiversity and ecosystem services provision in these tropical forest regions. GEF is also seeking additional donors to expand the TFA to other tropical countries. There are seven countries outside of these three large regions which still retain approximately 50 percent of their original tropical forest cover. These countries (Belize, Bhutan, Cambodia, Costa Rica, Laos, Panama and Zambia) will also be eligible for further investments if resources become available in the near future.




section

Monitoring the GEF Biodiversity Portfolio

Monitoring Results at the Portfolio Level

THE GEF EVALUATION OFFICE develops the policy, related guidelines and administrative procedures for monitoring and evaluation in the GEF. The policy and guidelines help project managers and Agency and GEF Secretariat staff plan and conduct monitoring and evaluation. The GEF Monitoring and Evaluation Policy provides norms and standards for the GEF Secretariat and the GEF Evaluation Office.²⁶ The Policy explains the concept, role and use of monitoring and evaluation within the GEF; establishes minimum requirements for how projects should be monitored and evaluated in line with international standards; and assigns roles and responsibilities for these tasks. The GEF Agencies plan and implement their project monitoring and evaluation, in line with their own systems and procedures and based on these minimum requirements. »





Between 2003-2006, GEF projects supported: 41 countries to strengthen their protected area systems; 566 protected areas (137, 234, 149 hectares); 63 new protected areas (20,004,213 hectares); 10 World Heritage Sites (5,868,817 hectares); 47 high priority ecosystems for biodiversity globally (41,314,416 hectares); 32 Biosphere Reserves (26,389,842 hectares); and 40 Ramsar sites (3,060,447 hectares).

The biodiversity tracking tools were introduced in GEF-3 to measure progress in achieving the outputs and outcomes established at the portfolio level for GEF-3 in the biodiversity focal area.²⁷ Given slight changes in the GEF's biodiversity strategy in GEF-4, modified Tracking Tools for GEF-4 projects are being applied.

The tracking tools are applied three times: at CEO endorsement, at project mid-term and at project completion. Project outcomes from the GEF-3 and GEF-4 project cohort are aggregated for analysis of directional trends and patterns at a portfolio-wide level to inform the development of future GEF strategies and to report to the GEF Council on portfolio-level performance in the biodiversity focal area as the projects are completed and evaluations conducted.

Results from GEF-3

After the close of the GEF-3 replenishment cycle, the coverage of the approved GEF-3 projects for the three primary strategic objectives of the GEF-3 strategy was compiled (*see Table 3*). As the GEF-3 projects are implemented, portfolio outcomes from these investments will be aggregated and reported on a periodic basis.

26. http://gefweb.org/uploadedFiles/Policies_and_Guidelines-me_policy-english.pdf

27. The biodiversity tracking tools can be found at www.thegef.org



TABLE 3 > Achievement of Targets in GEF-3

STRATEGIC PRIORITY

ONE FOR GEF-3

Catalyzing Sustainability of Protected Area Systems

TARGETS FOR ENTIRE GEF-3 (COVERAGE)

- At least 15 countries receive support for strengthening PA systems to ensure their long-term sustainability.
- At least 400 PAs supported, of which at least 20 percent should be new additions.
- At least 70 million ha of PAs supported.
- Number of protected areas and total hectares under any global priority list.

GEF-3 COVERAGE TARGETS ACHIEVED

- Forty-one (41) countries were supported to strengthen PA systems.
- 566 protected areas.
- 137,234,149 hectares supported.
- 63 new protected areas supported, totaling 20,004,213 hectares, or 11 percent of total protected areas supported.
- 10 World Heritage Sites (5,868,817 hectares)
- 47 high priority ecosystems for biodiversity globally (41,314,416 hectares)
- 32 Biosphere Reserves (26,389,842 hectares)
- 40 Ramsar sites (3,060,447 hectares)
- Total hectares under global lists: 76,633,522 hectares, or about 56 percent of total coverage.

STRATEGIC PRIORITY TWO

FOR GEF-3

Mainstreaming Biodiversity Conservation in Production Landscapes/Seascapes and Sectors

TARGETS FOR ENTIRE GEF-3 (COVERAGE)

- At least five projects in each of the targeted sectors focused on mainstreaming biodiversity into the sector.
- At least 20 million ha in production landscapes projects and seascapes contribute to conservation or sustainable use of biodiversity.
- At least five countries promote conservation and sustainable use of wild species and landraces.

GEF-3 COVERAGE TARGETS ACHIEVED

- Agriculture: 43 projects
 Fisheries: 21 projects
 Forestry: 26 projects
 Tourism: 23 projects
 Mining: 3
- 98,596,081 hectares in landscapes and seascapes contribute to conservation or sustainable use of biodiversity
 - 33 countries with projects on wild species and landraces conservation and sustainable use.

STRATEGIC PRIORITY

THREE FOR GEF-3

Capacity Building for the Cartagena Protocol on Biosafety

TARGETS FOR ENTIRE GEF-3 (COVERAGE)

- All (GEF eligible) Parties to the CBD that are signatories to the Protocol or have expressed the intention of becoming Parties to it, for a basic level of capacity building to prepare for entry into force of the Protocol.
- All (GEF eligible) Parties to the Protocol for more advanced capacity building for implementation of the Protocol.

GEF-3 COVERAGE TARGETS ACHIEVED

- The global Development of National Biosafety Frameworks Project has provided support to 122 countries for developing their NBFs and for regional activities to promote regional collaboration and exchange.
- To date 98 countries have completed National Biosafety Frameworks.
- 12 countries participating in the implementation of NBFs project (11 Parties).
- 11 additional Implementation projects have been approved with UNEP up until October 2006 for CPB Parties with draft NBFs completed.
- The global project Building the Capacity for the Effective Participation of Parties in the Biosafety Clearing House (BCH) has assisted 119 countries to participate in the BCH mechanism.



section

Looking Ahead: What is Next for GEF

A New GEF: Seeking Biodiversity Impacts Commensurate with the Scale of the Threats

THE FOURTH PHASE of the GEF is becoming, in many ways, a turning point for the facility, and for revisiting its role as the largest funding mechanism dedicated to the protection of global biodiversity. In order to continue to fulfill its function as the financial mechanism of the CBD, the GEF must evolve and be strengthened. The emphasis on biodiversity as an individual focal area should remain at GEF, not only to highlight the specificities of dealing with an irreplaceable global good whose value to society remains to be fully assessed, but also to address the ways to deal with existing and emerging threats, as well as identify rapidly expanding opportunities to act strategically. GEF needs to move from solely dealing with individual projects designed to achieve specific biodiversity goals to larger programs composed of many complementary projects, which themselves could include resources from different focal areas, adding to the biodiversity-specific investments. »



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The reformed GEF created a Natural Resources Management team, breaking the silos that existed in the focal areas of biodiversity, land degradation and international waters. This structure allowed for strategic cross-fertilization to occur and enabled new multi-focal area programs to emerge, such as the Sustainable Forest Management program. The other pioneering programs introduced during GEF-4 (e.g. Pacific Alliance for Sustainability, and the China Biodiversity Partnership and Framework for Action, among others), have opened the opportunity to pool resources from biodiversity, climate change mitigation and climate change adaptation, land degradation and international waters into more integrated programmatic action plans tackling multiple issues and fostering synergy among a diverse set of interventions. Such a scale of action also promotes a higher degree of efficiency in the overall conservation investment.

Nothing can better illustrate this change in the scope of planned interventions, and in the ambition of delivering outcomes that are fundamental to biodiversity but that also result in multiple benefits, than GEF's Forest Management Strategy and its associated Tropical Forest Account. Tropical forests, in addition to conserving global biodiversity, sustaining rural livelihoods, and providing spiritual and cultural havens for local and remote populations, are also among the largest and most important providers of ecosystem services on Earth, fundamental to maintaining our planet's long-term health and stability. Tropical forests have now been identified as a significant part of the

overall CO₂ emission reduction scheme, given that they are responsible for 20 percent of the current greenhouse gas emissions problem.

The SFM program in GEF-4 is allowing GEF to experiment with the programming of its resources in a more structured and focused way, and to address the major challenges to forest ecosystems, seeking multiple benefits out of the combined investment, specifically in biodiversity, climate change and livelihoods. The first large program being developed under this framework is the Congo Basin Initiative, involving six central African countries, which is already attracting additional donors to complement GEF's investments. This leveraging is key, as GEF's ability to act effectively is still constrained by insufficient funding to address the growing threats in forest-rich developing countries. The facility has been very successful in mobilizing co-financing from implementing agencies and other sources, but the magnitude of the challenge requires that GEF significantly augments its direct investment capacity, as the demand by governments willing to take decisive steps to curb deforestation, habitat degradation and biodiversity loss is growing rapidly. Additional programs for the Amazon and New Guinea, also under GEF's SFM strategy, are being conceptualized.

As the GEF gains experience through the implementation of its sustainable forest management program, it is starting to lay the foundation for a more ambitious global forest initiative in GEF-5, incorporating more explicit climate change mitigation objectives. Threats to forests

Tropical forests, in addition to conserving global biodiversity, sustaining rural livelihoods, and providing spiritual and cultural havens for local and remote populations, are also among the largest and most important providers of ecosystem services on Earth.



and opportunities for their conservation and sustainable management arise from a variety of sectors. These include agriculture expansion, shifts in global commodity markets, infrastructure development and energy. But, more importantly, the role of forests in the global carbon equation is solidifying in policy circles, and GEF must be programmatically prepared to act swiftly in this arena. The effective implementation of the SFM strategy will thus require a more holistic, wide-reaching approach.

The imperative of dealing with climate change has introduced a new reality to GEF's programs spanning natural resource management outcomes. While it is necessary to act in the short term, before important windows of opportunities to safeguard global biodiversity close, it is no longer sufficient to solely address the most immediate biodiversity conservation challenges. For example, pressing action must start to be complemented by long-term sustainability interventions to cope with the anticipated effects of climate change. In some regions, entire protected area systems will need to be the focus of adaptation strategies, as species and communities adjust to a changing environment.

At the same time, the opportunities to combine multiple goals in natural resource management are growing. We now know how interdependent the objectives of combating desertification, introducing sustainable land management and improving productive systems all are for successful biodiversity conservation strategies to emerge. This logic of positive, interdependent links permeates an innovative GEF program, the Central Asian Countries Initiative (CACIM). Through this

recently launched program, five Central Asian countries have joined with more than a dozen development partners to build a \$1.4 billion program to restore, maintain and enhance the productivity of degraded lands. Over the next ten years, CACILM will work toward sustainable land management and reversing land degradation in Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan.

GEF must also ramp up the reach of its International Waters programs, particularly in marine conservation and integrated watershed management. GEF has become the most important catalyst globally in protected areas creation and management. But this effort has been mostly focused on the terrestrial realm, although even here significant gaps in coverage remain and must be dealt with. As evidence accumulates to demonstrate the vital role of marine protected areas in maintaining and restoring fisheries and vulnerable systems such as coral reefs, the efforts in the marine realm must be brought to a similar scale as those so far achieved in terrestrial ecosystems.

The GEF needs to continue striving to deliver on the CBD's objective to promote access and benefit sharing from the use of genetic resources, and associated traditional knowledge. While in GEF-4 the demand from countries has been virtually lacking, the prospects for the emergence of an international regime on Access and Benefit Sharing are increasing. Looking towards that horizon, the GEF intends to support initiatives on capacity building on access and benefit sharing globally.

In summary, GEF is evolving to become a more strategic, wider-reaching, flexible and effective institution. This move is inevitable if the facility is to be able to act financially on the priorities and targets set forth by the global community, crystallized through the decisions by signatory parties to the CBD. GEF will need to be resourced to be able to address the different temporal scales. For example, in the short term, GEF must continue to help developing countries fill major gaps in the coverage of protected area systems. The top priority gaps are for highly threatened species and habitats that will not survive in the absence of direct protection or alternative land uses. This short-term agenda will be vital for the commitment by the CBD to significantly reduce the current rate of biodiversity loss. This agenda must also be rapidly scaled up in the world's oceans. There is also a need to strengthen the financial prospects of protected area systems to meet their management objectives. The investments that have been made up to now and into the future must not be lost due to under-resourced or inefficient upkeep.

GEF must also continue to expand its efforts in building the capacity of institutions to act as effective stewards of their environmental goods. Capacity building is likely the most enduring of investments, but one whose results are felt mostly in the medium and long term. Emerging environmental issues that affect biodiversity, paramount among them being climate change, need to become part of GEF's projects and programs beyond specific sectoral action on climate. Forest conservation worldwide offers win-win solutions and resource flows

almost unprecedented in the history of the global environment, even though the globalized forces competing with this outcome are also mounting.

In the long-term, biodiversity conservation must be mainstreamed into all development sectors. There is an emerging consensus among environmental economists that changes in biodiversity affect the provision of ecosystem goods and services, particularly those on which rural communities depend most. While the magnitude of this dependence is yet to be determined, most studies agree that biodiversity conservation is a very worthwhile investment, in particular for biodiversity-rich countries. The GEF is open to embrace these new challenges and opportunities, experimenting with large-scale projects and programs on mainstreaming biodiversity into productive landscapes.



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> 26 TRUST FUNDS SUPPORTED WITH \$300 MILLION > 1,600 PROTECTED AREAS
COVERING MORE THAN 360 MILLION HECTARES > MAINSTREAMING BIODIVERSITY IN
MORE THAN 100 MILLION HECTARES > 122 NATIONAL BIOSAFETY FRAMEWORKS