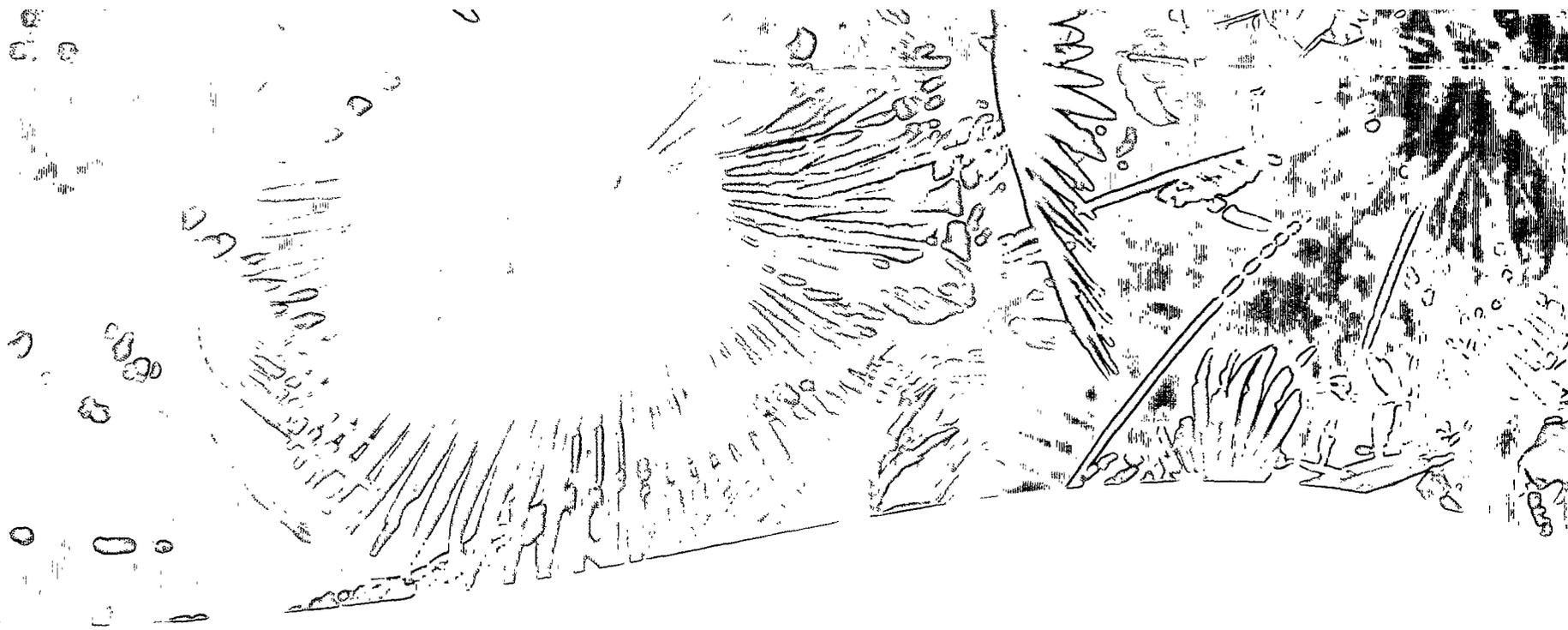


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Biodiversity Conservation in Forest Ecosystems

World Bank Assistance
1992-2002

July 2002



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This paper summarizes World Bank Group support between 1992 and 2002 for conservation and sustainable use of biodiversity in forest ecosystems. It was prepared by Kathy MacKinnon, Nabiha Megateli, Gunars Platais, Tony Whitten and Alan Isaac (Biodiversity Team) and David Cassells, Jim Douglas, Christian Peter and Anita Gordon (Forest Team) with generous input from regional Bank staff and the International Finance Corporation (IFC). This paper is a contribution to the ongoing review of the Bank Biodiversity Portfolio. It is a work in progress and has not been formally cleared by Bank management. This publication is available online at <<www.worldbank.org/biodiversity>>.

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The Bank's Forest Biodiversity Portfolio

Introduction

The conservation and sustainable use of forest ecosystems and forest biodiversity are critical components of the World Bank's mission to help alleviate poverty and support sustainable development. More than 1.6 billion people in Bank client countries depend on forests for their livelihoods, while wood is the main household energy source for heating and cooking of many of the world's poorest communities. Wise management of forests and forest resources is therefore central to sustainable development with forests providing resources for livelihoods, sustenance, trade, medicines and industrial development. Forest ecosystems provide environmental services, including watershed and coastal protection, that reduce human vulnerability to natural hazards such as drought, floods and hurricanes. Forests also provide benefits of global value such as carbon storage and sequestration, nutrient cycling and biodiversity conservation. These vital environmental services are important to local communities as well as the global community. Conservation and wise use of forest ecosystems is therefore a central pillar of World Bank assistance, and is embodied in the Bank's new *Environment Strategy*.

This paper summarizes the efforts of the World Bank Group (WBG) over the past decade (1992–2002) to assist client countries to conserve and manage forest biodiversity. It reflects investments in forest ecosystems and forest biodiversity since the Earth Summit in

Rio in 1992; this time span also covers the period that the Bank's current Forest Policy has been in force. The review includes all projects and project components which contribute directly to conservation and sustainable use of forest ecosystems and forest biodiversity. It includes projects financed through the International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), the Pilot Program to Conserve the Brazilian Rainforest (RFTF) and Global Environment Facility (GEF) projects executed through the World Bank. Additionally, the International Finance Corporation (IFC) has contributed to biodiversity conservation through private sector investments. The portfolio includes regular Bank lending projects as well as regular and medium-sized GEF projects (MSPs) and enabling activities (EAs).

In addition to projects and project components with specific and direct biodiversity-related objectives (the biodiversity portfolio), the World Bank has been assisting many of its client countries with projects which may also have positive, albeit indirect, impacts on forests and biodiversity. For example, projects that address watershed management, re-forestation and establishment of plantations to meet fuelwood and timber needs may benefit forest biodiversity by reducing pressures on natural forests. This update, however, does not include forestry projects which provide such indirect benefits. It does

include some projects where specific biodiversity conservation measures have been put in place in mitigation for environmental impacts resulting from a Bank-funded development project, e.g. the establishment of a cloud forest protected area beside the Colombia toll road concession.

Methods

Today the World Bank is the largest single international funding source for biodiversity projects. A previous review of the biodiversity portfolio covered the period from 1988 until 1999 when the Bank mobilized US\$2.6 billion of funding for more than 200 projects worldwide that promoted sustainable use and conservation of biodiversity in 85 countries and 10 regional, multi-country efforts (World Bank, 2000a). Approximately US\$1.5 billion of that total targeted forest ecosystems. This review covers a different time period (1992–2002) and focuses *only* on those projects with components and activities targeted to conservation and sustainable use of forest biodiversity and forest ecosystems. The data for FY 2002 are collated up to March 2002.

This review of the forestry biodiversity portfolio involved the following five-step methodology: 1) *Compilation* of data from relevant Bank databases; 2) *Updating Project List* by cross checking with archived project documents; 3) *Comprehensive Database Creation*; 4) *Peer Review* and revision of preliminary portfolio listings and data with task managers and the Bank biodiversity and forestry specialists; and 5) *Database Analysis* to produce summary tables and figures of regional and annual funding, funding source and biodiversity activity. Projects were assigned to fiscal year based on their date of approval by the World Bank Board or, for the case of MSPs and EAs, by the country management unit. The data for FY 2002 are

incomplete since several more forest projects are in the pipeline and scheduled for Board review by June 2002.

Selected projects were assessed for source of funding, whether WBG (loans or grants) or cofinancing from non-Bank sources. Where there was more than one source of WBG financing in a project these were assessed separately to avoid double counting—see Annex 1. Cofinancing amounts include contributions from borrower governments, local beneficiaries, nongovernmental organizations (NGOs), bilateral donors, regional development banks and United Nations organizations. As in previous reviews, biodiversity costs were determined by itemizing each activity component (World Bank 2000a). For each project, figures have been computed for total costs, total biodiversity costs (WBG funds plus associated cofunding), and Bank biodiversity funding.

Biodiversity activities supported by Bank projects or project components were categorized into the following ten categories of explicitly stated, and funded, activities: 1) *Institution-Building*, including institutional strengthening, policies and strategic action plans for biodiversity management at national, transboundary, ecoregional and landscape levels; 2) *Improving Biodiversity Information* through mapping, biodiversity assessments, inventories, collections, cataloguing, and ecological research; 3) *Public Awareness Raising* and environmental education 4) *Ex-situ Biodiversity Conservation* through breeding programs and collections, arboreta and gene banks; 5) *Establishment of New Protected Areas* including designation and management ; 6) *Strengthening Management of Existing Protected Areas*; 7) *Development and Biodiversity Management in Park Buffer Zones* including biodiversity conservation and sustainable use, rural development consistent with conservation objectives 8) *Biodiversity Management in*

Production Landscapes including conservation planning and sustainable forest management in biological corridors and production forests 9) *Sustainable Financing and Market Mechanisms* for long-term biodiversity management, including trust and livelihood funds, economic incentives, conservation easements, payments for ecological services, small enterprises and private sector; and 10) *Ecotourism*. Annex 1 provides a listing of all selected projects with funding, source of funding and activities.

Portfolio Overview

The forest biodiversity portfolio of the WBG has seen a gradual funding increase over the past decade. Between 1992 and 2002 the Bank has invested US\$2.7 billion in 207 projects which fully or partially support biodiversity conservation in forest ecosystems. These projects are located in 90 countries, with 81 national projects, two global and five regional initiatives (see map, Annex 2). These projects directly support biodiversity conservation in a range of forest habitats, including tropical evergreen and monsoon forests, forested savanna woodlands and dry forests as well as temperate and boreal forests of cooler climates and montane and cloud forests. During the period between 1992 and

2002, WBG lending for all forest biodiversity projects together totaled the equivalent of about US\$1.6 billion and leveraged another US\$1.1 billion, resulting in a total forest investment portfolio exceeding US\$2.7 billion. Figure 1 summarizes biodiversity investments from all funding sources. Table 1 shows annual forest biodiversity investments by funding sources.

Client governments have borrowed 29 percent of this total through IBRD loans or IDA credits, representing a total of US\$778 million. Grants comprise 33 percent (US\$887 million) through the Global Environment Facility (US\$657 million), the Pilot Program to Conserve the Brazilian Rainforest (US\$205 million) and the Development Grant Facility (US\$25million). The remaining 38 percent (US\$1,068 million) represents cofinancing and parallel financing, equivalent to an additional 64 cents leveraged for every dollar invested by the Bank in forest biodiversity. Table 2 shows World Bank investments and leveraging by funder.

Investment Trends

The WBG is supporting conservation and sustainable use in forest ecosystems worldwide. Figure 2 and Table 3 show the cumulative

Figure 1. Forest biodiversity investments, all funders by FY, 1992–2002

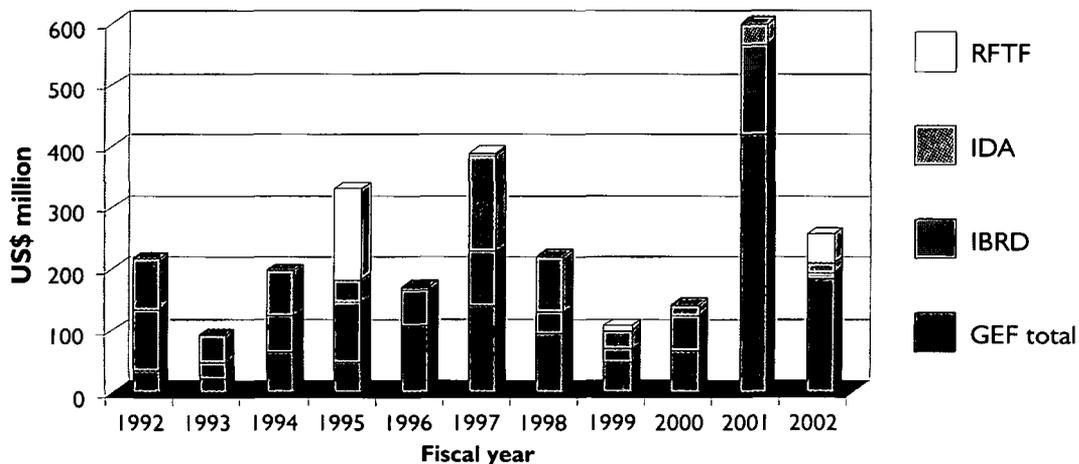


Table 1. Total forest biodiversity investments by year, 1992–2002 (US\$ million)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
<i>Grand Total</i>	216.35	91.76	196.22	329.29	169.64	388.08	220.13	108.57	141.52	598.34	257.08	2716.96
<i>RFTF</i>				146.70		2.00		7.80		2.00	46.50	205.00
<i>IDA</i>	80.46	42.83	71.85	35.89	4.48	157.17	89.52	30.37	16.24	30.50	14.69	573.98
<i>IBRD</i>	100.41	25.79	60.66	97.96	54.87	88.58	35.69	22.36	57.57	146.96	11.10	701.93
<i>GEF Total</i>	35.48	23.15	63.71	48.74	110.29	140.33	94.92	48.05	67.72	418.88	184.79	1236.05
<i>GEF IFC</i>						20.00	20.00					40.00
<i>GEF EA</i>		0.40				2.88	1.30	0.18	0.44			5.21
<i>GEF MSP</i>							3.81	17.71	8.14	33.88	4.37	67.91
<i>GEF REG</i>	35.48	22.75	63.71	48.74	110.29	117.45	69.81	30.15	59.14	385.00	180.42	1122.94

Table 2. Forest biodiversity and leveraging by funder (US\$ million)

<i>Funder</i>	<i>Total biodiversity</i>	<i>Bank biodiversity</i>	<i>Counterpart and co-funded biodiversity</i>
<i>Grand total</i>	2716.97	1640.80	1076.17
<i>RFTF</i>	205.00	205.00	0.00
<i>IDA</i>	573.98	396.97	177.01
<i>IBRD</i>	701.93	381.67	320.26
<i>GEF total</i>	1236.05	657.16	578.90
<i>GEF IFC</i>	40.00	7.00	33.00
<i>GEF EA</i>	5.21	5.21	0.00
<i>GEF MSP</i>	67.91	22.92	44.99
<i>GEF REG</i>	1122.94	622.03	500.91

Figure 2. Total forest biodiversity investments by Region, 1992–2002

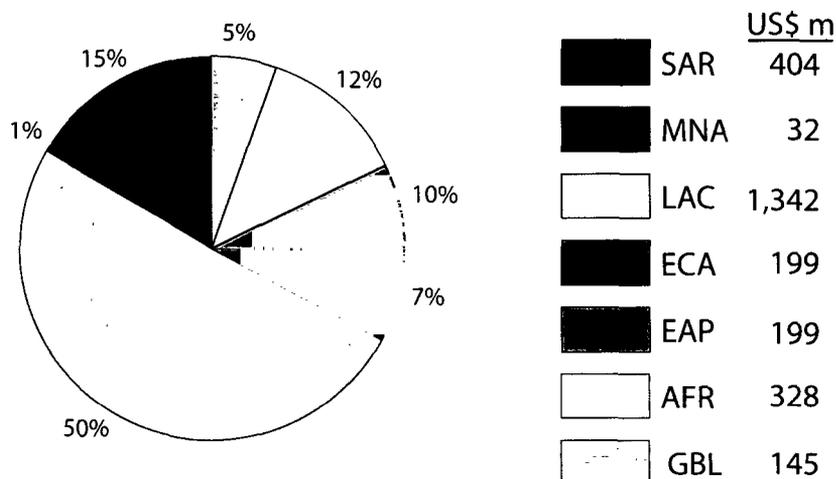


Table 3. Total forest biodiversity investments by Region, 1992–2002 (US\$ million)

	Total	Global projects	AFR	EAP	ECA	LAC	MNA	SAR
Grand total	2,716.97	145.00	328.45	266.31	199.16	1,341.68	32.33	404.04
RFTF	205.00	0.00	0.00	0.00	0.00	205.00	0.00	0.00
IDA	573.99	0.00	144.18	110.95	23.15	54.57	0.64	240.50
IBRD	701.93	0.00	0.00	48.89	84.11	566.24	2.69	0.00
GEF total	1,236.05	145.00	184.27	106.47	91.90	515.87	29.00	163.54
GEF IFC	40.00	20.00	0.00	0.00	0.00	20.00	0.00	0.00
GEF EA	5.20	0.00	0.56	1.02	1.87	0.86	0.89	0.00
GEF MSP	67.91	0.00	1.81	7.29	2.00	53.96	2.85	0.00
GEF REG	1,122.94	125.00	181.90	98.16	88.03	441.05	25.26	163.54

Note: Since this table is based on Total Biodiversity amounts, Grand Total = Sum of Total Biodiversity amounts associated with GEF Total, IDA, IBRD and RFTF. The World Bank's operational Regions are Africa (AFR), East Asia and Pacific (EAP), Europe and Central Asia (ECA), Latin America and Caribbean (LAC), Middle East and North Africa (MNA), and South Asia (SAR).

biodiversity funding by Region. The major share (50 percent) of all biodiversity funding in forest ecosystems went to Latin America and the Caribbean (US\$1,342 million), with 15 percent to South Asia, 12 percent to Africa, 10 percent to East Asia, and 7 percent to Eastern Europe and Central Asia. Only one percent of total biodiversity funding went to the Middle East and North Africa. A further five percent of total biodiversity funding represents financing through two global initiatives, the IFC Small and Medium Enterprise Program and the Critical Ecosystem Partnership Fund.

The total World Bank Group investment in forest biodiversity, excluding co-financing, reaches US\$1.6 billion. The LAC region leads the investments with US\$812 million as shown in Table 4 and Figure 3. The total number of projects funded by IBRD and IDA is 54 projects and 50 projects respectively. Figures 4 and 5 show the cumulative IBRD and IDA funding for forest biodiversity by region. Latin America and the Caribbean region has the largest share of IBRD funding (81 percent). Many of the LAC countries are among the mid to higher income developing countries and not eligible for IDA

credits. The relatively poorer countries of South Asia and Sub-Saharan Africa have received the largest share of IDA funding, corresponding to 67 percent of total IDA funds dedicated to forest biodiversity. South Asia represents 42 percent of all IDA funding, with much of that lending to India, both for direct conservation activities in protected areas and for joint forest management activities consistent with sustainable use. From these figures, it can be seen that even the poorest countries are borrowing for conservation of forest ecosystems and forest biodiversity.

As an Implementing Agency for the Global Environment Facility, the WBG provides GEF grants for enabling activities, medium-sized projects and regular GEF grants, both through the Bank and the IFC. Approximately 46 percent of the total forest biodiversity portfolio is associated

Table 4. WBG forest biodiversity investments by Region, 1992–2002

Region	Funding (US\$ m)
GBL	53.5
AFR	170.0
EAP	193.2
ECA	140.4
LAC	812.1
MNA	22.1
SAR	254.1
Total	1,645.4

Figure 3. Bank forest biodiversity investments by Region, 1992–2002 (US\$1,640 million)

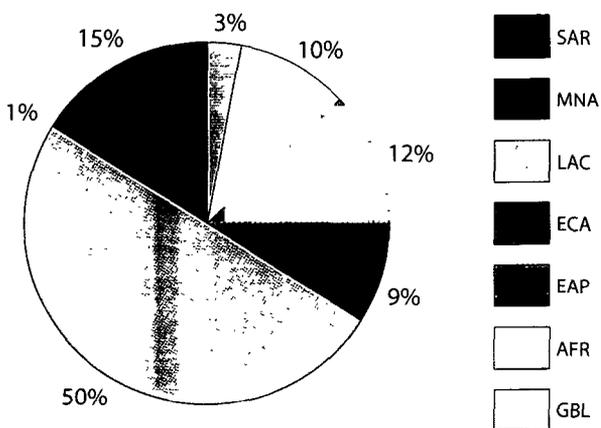


Figure 4. IBRD forest biodiversity investments by Region, 1992–2002 (US\$694 million)

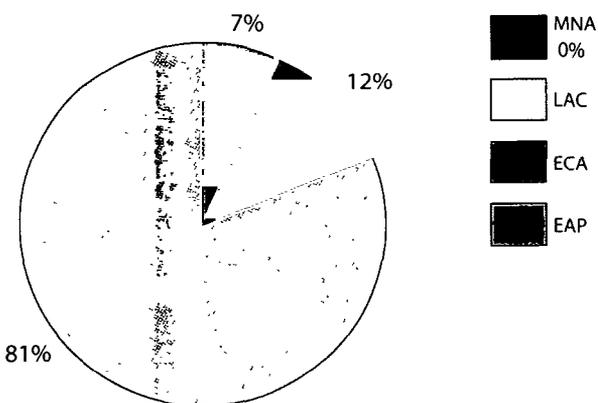
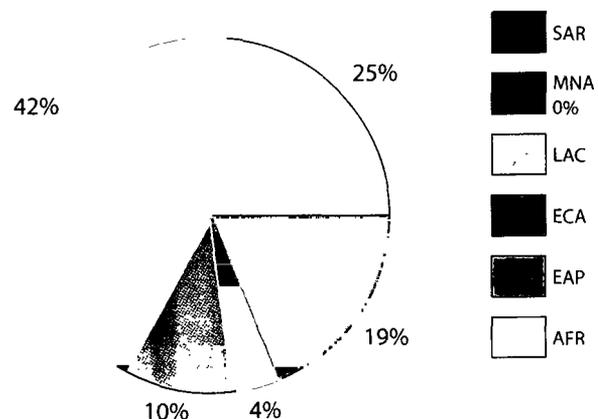


Figure 5. IDA forest biodiversity investments by Region, 1992–2002 (US\$574 million)



with grant funding through the Global Environment Facility (GEF). Table 5 shows the disbursements for GEF forest projects, implemented by the World Bank,

Table 5. GEF investments in forest biodiversity by grant window, 1992–2002

	(US\$ m)
<i>GEF total</i>	1,236.05
<i>GEF IFC</i>	40.00
<i>GEF EA</i>	5.20
<i>GEF MSP</i>	67.91
<i>GEF REG</i>	1,122.94

over the period 1992–2002 by grant window. The cumulative total of GEF financing (GEF grant plus associated cofinancing) is \$1,236 million spread across 63 regular projects (\$1,123 million), 20 enabling activities (\$5.2 million) and 29 medium-sized projects (\$67.91 million). Twenty-one of the regular GEF grants are fully integrated in Bank lending operations.

Figures 6 and 7 illustrate GEF grants by window and how projects are distributed regionally, by number of projects and amount invested. Ten of the 20 enabling activities have been in Europe and Central Asia region (ECA). Assisting these countries with preparation of enabling activities has been an important step for developing a dialogue which often led to Bank investment for biodiversity and forest management. The region with the most MSPs has been Latin America and the Caribbean (LAC) where MSPs have provided the opportunity for innovation in conserving forest biodiversity. LAC is also the region with the highest GEF funding overall for forest biodiversity, a reflection of the extent and high biodiversity value of the region's forests.

The introduction of the MSPs in 1997 made mid-size grants more readily available to NGOs and non-government stakeholders and allowed a rapid expansion of the biodiversity portfolio. By 2002 there were 29 approved MSPs focusing on forest biodiversity, the majority in LAC which has 19 ongoing MSPs targeting forest ecosystems. Overall, for GEF projects the ratio of leveraged funding against grant resources is

Figure 6. GEF projects by grant window and Region, 1992–2002

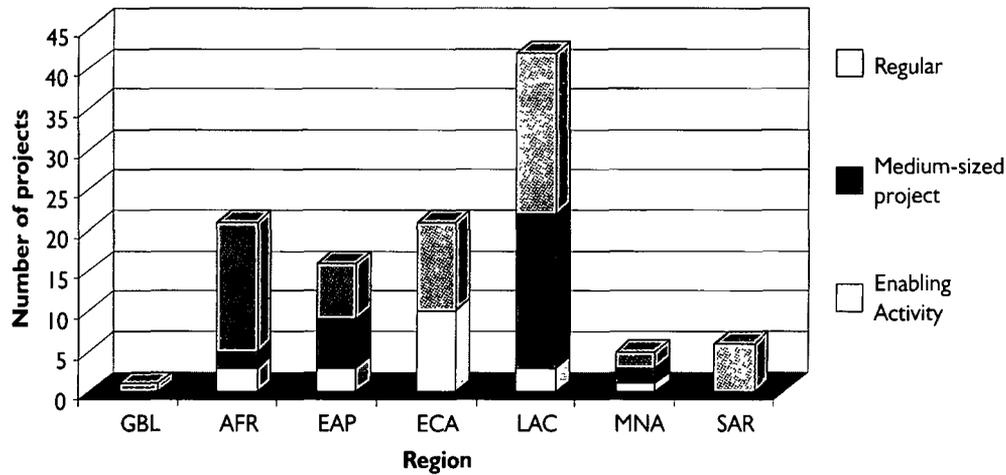
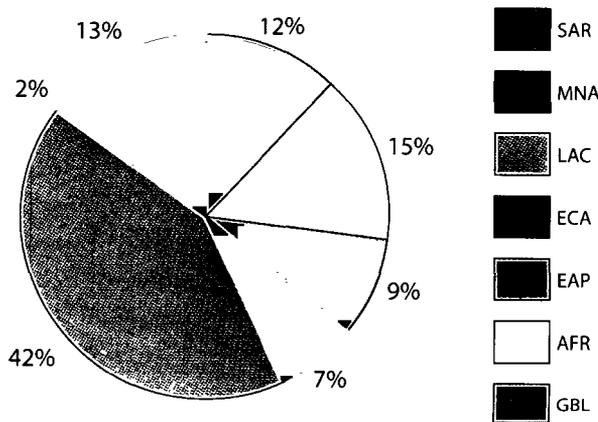


Figure 7. GEF forest biodiversity investments by Region, 1992–2002 (US\$1,236 million)



Overall, the largest amount of funding and support has gone to expansion and strengthening of protected areas, including conservation activities in park buffer zones. Although support to protected areas is likely to continue, the Bank is increasingly seeking opportunities to expand biodiversity activities into the wider landscape. The South Asia region, and especially India, have already made excellent progress in this regard with biodiversity conservation and sustainable management often fully integrated and mainstreamed into regular Bank lending.

almost 1:1. For MSPs the ratio of leveraged cofinancing is even higher, almost two dollars for every dollar of GEF grant.

Figure 8 shows the regional distribution of the \$1,071 million co-financing for forest biodiversity over the 1992–2002 decade.

The WBG forest biodiversity portfolio covers a range of activities which promote conservation and sustainable use of forest ecosystems and more equitable sharing of the benefits derived from them. Table 6 and Figure 9 illustrate the distribution of biodiversity activities supported within the entire forest biodiversity portfolio.

Figure 8. Co-financing for forest biodiversity by Region, 1992–2002 (US\$1,071 million)

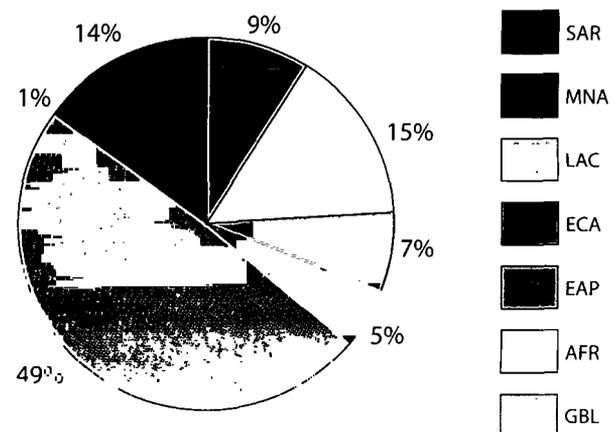
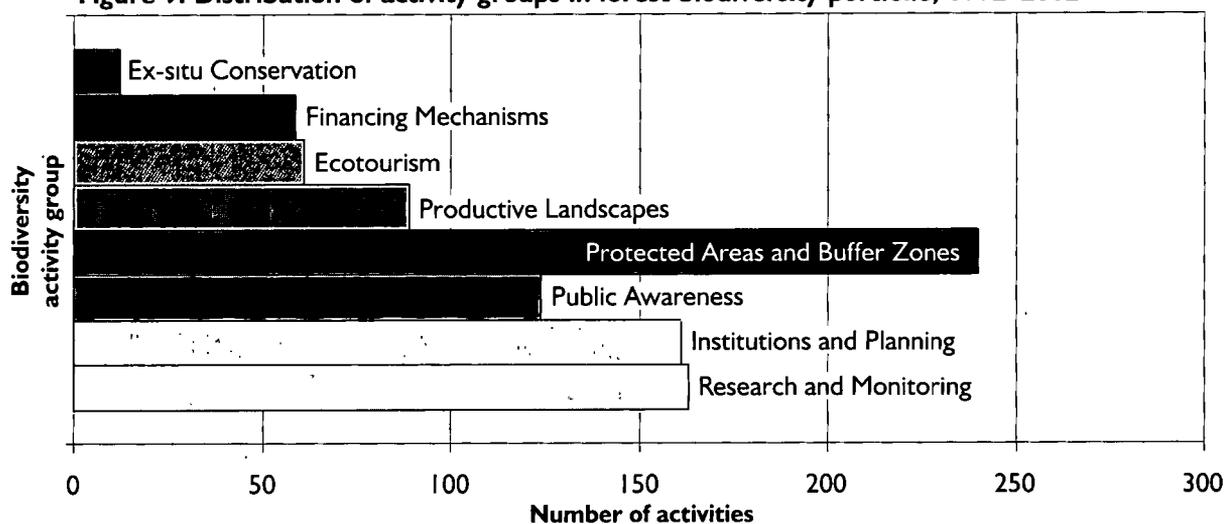


Table 6. Distribution of activity groups in forest biodiversity portfolio, 1992–2002

Protected Areas and Buffer Zones (5, 6, 7)	240
Research and Monitoring (2)	163
Institutions and Planning (1)	161
Public Awareness (3)	124
Productive Landscapes (8)	89
Ecotourism (10)	61
Financing Mechanisms (9)	59
Ex-situ Conservation (4)	12

Note: Numbers in parentheses refer to activities as grouped in Annex 1.

Figure 9. Distribution of activity groups in forest biodiversity portfolio, 1992–2002



Highlights of the Portfolio — Projects and Partnerships

Projects included in this review directly support biodiversity conservation in forest ecosystems. These include activities such as conservation planning and preparation of national biodiversity strategies in over 20 countries; establishment of new protected areas and biological corridors (e.g. Laos, Indonesia, Georgia, Ghana, Central America and Brazil); improved management of ‘paper parks’ and existing protected areas (e.g. India, Madagascar, Uganda, Ecuador, Brazil); ex-situ conservation and research on native tree genetic diversity (Poland, Paraguay and Turkey); conservation of medicinal plants (Sri Lanka and Ethiopia); control of invasive exotic plants and restoration of native forests (India, Mauritius, Seychelles); and promoting community management of forest protected areas, indigenous reserves and sacred groves (Colombia, Ecuador, Ghana, Peru). Large forest biomes are further protected by improved management systems, including fire control and prevention programs in Brazil, Russia, Mexico and Venezuela.

Bank projects and programs promote sustainable use of biodiversity through institutional strengthening and capacity building for more sustainable forest management and monitoring of forest concessions (Cambodia, Cameroon, Russia, Papua New Guinea, Georgia); forest partnerships to encourage conservation set-asides and allow natural forest regeneration of logged areas and degraded pastures (China,

Papua New Guinea, Colombia); studies and adaptive research on indigenous forest knowledge (Guatemala, Peru, Uganda); community forest and woodland management (Benin, Ghana, India, Laos); sustainable harvesting of timber and fuel in park buffer zones (Chad, China, Senegal); agroforestry systems such as shade coffee (El Salvador, Mexico); coastal forest and mangrove restoration (Bangladesh, Vietnam); and sustainable harvesting of non-timber forest products, including medicinal plants (Ethiopia, Sri Lanka, India, Peru, Nigeria, Uganda). Several projects provide innovative new financing mechanisms for protecting forest habitats and resources (Bhutan, Uganda) and financial incentives to encourage forest regeneration and strengthen forest protection (Costa Rica). A notable feature of many of these programs is the increasing involvement of local producer or community organizations in implementation, providing communities with a key stake in sustainable resource management and biodiversity conservation.

Through a combination of lending and grant assistance, the Bank is assisting client governments to seek creative ways to support biodiversity conservation by working with local, national and international NGOs, academic institutions, other donors and local community organizations. Since the Bank’s overarching mission is poverty eradication, a key challenge is to find ways to promote development that encourages both biodiversity conservation and poverty alleviation.

Protected Areas — Establishing and Strengthening Conservation Areas

Protected areas are the cornerstones of biodiversity conservation (Kramer and others 1997). Throughout the world, the Bank is supporting the establishment of new conservation areas (Laos, Brazil, Panama, Indonesia) as well as strengthening management of existing parks in temperate and boreal forest systems (Russia, Georgia, Poland) as well as tropical and monsoon forest ecosystems (Côte d'Ivoire, Congo, Ecuador, Indonesia, Cambodia and India). Projects target all forest ecosystems from coastal forests and mangroves (Ghana, Indonesia) to threatened cloud (Peru, Bolivia) and montane habitats (China, Bhutan, Morocco, Turkey) including unique habitats such as forests on karst limestone (Vietnam, Croatia). In many countries, including Brazil, Madagascar, Indonesia and India, such protected area programs are explicitly linked to sustainable livelihoods and improved resource management by local communities.

Many of these conservation interventions target major forest wilderness areas in both tropical and temperate regions. In Brazil, the Bank with its Alliance partner, the World Wide Fund for Nature (WWF), and the GEF is assisting the government to protect 41 million hectares of forest across the Brazilian Amazon. The Amazon Region Protected Areas Program (ARPA) is anchored in President Cardoso's commitment in 1998 to set aside at least 10 percent of Brazil's forests as conservation areas; this will more than triple the area currently under strict protection. A program is underway to strengthen 12.5 million hectares of existing parks and to establish new protected areas in another 28.5 million hectares, including representative examples of forest in each of the Amazon's 23 ecoregions. The ARPA program will establish a long-term financing mechanism to cover the recurrent costs and ensure the

sustainability of protected areas. Under the program a biodiversity monitoring system will be established to track the threats posed by deforestation, road construction, logging, cattle raising and other development activities in and around parks.

Russia contains about 22 percent of the world's forests, including 25 percent of all old-growth forests. Russia's 770 million hectares of forests make up the largest share of temperate/boreal forests in World Bank client countries and harbor important endemic biodiversity. Because of Russia's size and forest cover, there is a compelling need to balance economic development in the forest sector with sustainable management and conservation of biodiversity. A six year \$20m GEF project is supporting conservation of forests in the Russian Far East and will be complemented by a new forestry project dealing with forest management, including management of fire in these biodiversity-rich forests. Also in the Far East, a medium size grant (MSP) is promoting conservation of Siberian tigers and their prey base in the forests of Khabarovsk Krai.

Elsewhere, many forest reserves are fragmented and isolated and their long-term survival will depend on landscape conservation planning efforts that hinge upon a combination of political, social and economic factors. The Bank is engaged in a multitude of Integrated Conservation and Development Projects (ICDPs) which attempt to reconcile local and regional development needs with the conservation objectives of protected areas and promote biodiversity conservation in the larger production landscape. The ICDP for the one million hectare national park of Kerinci Seblat in Indonesia provided maps for development planning to local government agencies; supports biodiversity surveys and audits in adjacent forest concessions and provides small development grants to communities which enter conservation agreements with the park.

Box 1. Sustainable financing for protected areas

One of the greatest challenges for conservation is how to cover the recurrent costs of parks and protected areas. To address this problem, the Bank has helped to establish several national trust funds, using GEF financing as part of the cofunding. Trust funds in Bolivia, Peru and Mexico are helping to support protected area networks; another will shortly be established in Côte d' Ivoire. Trust funds have also been established for national training needs and capacity building to conserve forest ecosystems (Bhutan), to support a biodiversity grants program (Brazil) and to strengthen management at individual sites such as Mulanje mountain, Malawi. A regional fund is benefiting protected areas in the Transcarpathian mountains of eastern Europe.

Conservation trust funds are especially valuable because they provide a regular and predictable source of funding. The Mexican fund will provide a long-term, reliable source of funds for core protection and conservation activities and contribute to strengthened protected areas management and protection of unique biodiversity in eligible and special biosphere reserves. Financing through the Peruvian fund for protected areas (PROFONAPE) has strengthened and extended the protected area network and improved the policy framework and financial sustainability. A new project will provide additional resources to PROFONAPE to encourage greater stakeholder and community participation in park management to promote social sustainability of the protected area system.

The Mgahinga-Bwindi Impenetrable Forest Conservation Trust (MBIFCT) in Uganda focuses on two national parks, Bwindi and Mgahinga, which protect important gorilla habitat along the borders with Rwanda and Zaire. The trust fund provides resources for park management to strengthen protection of the gorilla populations and for research to better understand the ecology and social behavior of the gorillas and other native wildlife. The majority of the income (60 percent), however, is used to provide sustainable livelihoods for local people as an alternative to agricultural encroachment into the park. Initially capitalized with \$2 million of GEF financing, the trust fund has received additional support from USAID to finance park-related activities and an additional \$2 million top up to the capital from the Government of the Netherlands. By providing resources to protect the gorillas in Uganda, the trust fund is helping to support reservoir populations of this endangered species which may provide migrants to recolonise forest habitats in Uganda's war-torn neighbors.

The India Ecodevelopment Project provides development opportunities to neighboring communities to address some of the social and poverty needs that lead to biodiversity loss around evergreen and monsoon forest parks which provide important habitat for tigers in Kerala, West Bengal, Karnataka, Madhya Pradesh, Jharkhand and Rajasthan. At Periyar, Kerala, park managers have developed innovative partnerships with different user groups, such as thatch, reed and firewood collectors to allow organized collections in strictly zoned areas in return for help with forest patrols and forest protection. The park is also using its partnership with local

communities to eradicate invasive alien species such as *Eucalyptus* and *Lantana* that subdue natural regeneration and threaten ecosystem health.

Similarly, Romania is expanding and strengthening its protected area system while also supporting ecosystem management and rehabilitation of adjacent forest habitats degraded through overgrazing by livestock. To reduce further pressure on natural habitats, communities are being encouraged to adopt more ecologically-sensitive agriculture and livestock management and to adopt activities that further conservation objectives. Strong

education and awareness programs and scientific monitoring of key species and ecosystems underpin these activities.

New projects are giving increasing emphasis to local community participation and their roles within protected area management. In Peru the Bank is helping to establish communal reserves that will be managed by indigenous people within biodiversity-rich wilderness areas. In Papua New Guinea the Bank is establishing a trust fund to support conservation activities, including establishment of clan conservation areas, as an alternative to timber sales agreements (Box 2). In the Philippines a national NGO consortium, NIPA, is working with park managers, local communities and NGOs on land tenure, community lands and indigenous peoples issues within ten protected areas.

Sustainable Use and Natural Resource Management

In India forestry is the second largest land use after agriculture. More than 275 million people in India depend on forest lands for livelihoods and cash income (firewood, non-timber forest products, building materials), including more than 35 million tribals, the most disadvantaged groups in society. The World Bank has committed over \$800m to the forestry sector in India over the last 20 years with commitments to 16 projects from Uttar Pradesh and West Bengal in the north to Tamil Nadu and Kerala in the south of the subcontinent. These community-based joint forest management projects have led to significant improvements in forest management, reversal of deforestation trends in three states and increases in assets and incomes for thousands of forest fringe villagers. In Madhya Pradesh, for instance, the Bank financed joint forest management activities which led to the establishment of over 2400 oversight committees and benefited more than 6

million people. A critical element of success has been a change in attitude of state forest departments and an empowerment of local communities that has built capacity to improve both livelihoods and forest management. Both timber and non-timber assets have been transferred from state to joint management; the net present value of these assets is \$19 billion of which \$2 billion is shared by the communities. Although the primary objective of these projects is poverty alleviation, there have also been substantial biodiversity benefits.

In Eastern Europe, and the Former Soviet Union, the Bank has used a range of lending, and non-lending instruments and strategic partnerships to mainstream biodiversity into the forestry sector, using the complementarities between GEF grants and WBG lending. WBG assistance has focused on improved forest sector management, including fire and pest management (Russia), development of regulatory frameworks, restitution of forest lands to private landowners and communities (Romania) and restoration with native species of forests damaged by air pollution and acid rain (Poland and Belarus). In Georgia the Bank is engaged in dialogue in policy reform and increased community management of forests and natural resources. An IDA forest management project, linked to a GEF-funded project, will support biodiversity planning in the production forests of the Eastern Caucasus to maintain wildlife corridors (Box 3). Elsewhere in the region, the Bank has supported forest sector reviews (Russia, Kyrgyz Republic) to identify conservation and management priorities and an economic valuation of forests (Romania). A tri-national transboundary conservation project in the West Tien Shan in Central Asia (Kyrgyz Republic, Kazakhstan and Uzbekistan) will help to maintain important juniper and walnut forests, as well as the gene pool of native apple trees, within conservation areas and the intervening landscape.

**Box 2. From planning to action —
Forest conservation and management in Papua New Guinea**

Papua New Guinea (PNG) occupies the eastern half of the island of New Guinea and still boasts 33 million hectares of closed natural forest (77 percent of the country), home to numerous endemic species. Overall, PNG is sparsely populated with some 700 distinct cultural/language groups. Economic growth over the past two decades has been spurred by large-scale mining, petroleum and logging operations, though the majority of the population continues to rely upon subsistence agriculture (swidden) and collection and utilization of forest products. Some 15 million hectares of forests are accessible for logging, of which 1.5 million hectares have already been logged, generally in an unsustainable manner. Of the over 6 million hectare of approved timber blocks more than 1.5 million hectares overlap areas of high biological value. Forest loss and degradation is now becoming a serious problem.

Papua New Guinea is an important wilderness area but has very few protected areas under government management, just 0.2 percent of the total land area. Opportunities to expand the conservation estate will depend on encouraging local landowners to adopt land use practices that are consistent with conservation objectives. The World Bank has been assisting the Government of Papua New Guinea to assess the trade-offs and conflicts between conservation and development and to find ways to feed these decisions into land use planning. Funded by the Bank, a consortium of Australian scientists has been field testing tools to identify priority areas for biodiversity conservation in PNG. The BioRap methodologies are based on biodiversity values but can be used to determine a range of options to 'capture' maximum biodiversity, each with different biodiversity gains and costs in terms of agricultural and forestry opportunities forgone. The BioRap methodology deals only with the planning stage and does not attempt to address how priority areas should be managed.

A new World Bank/GEF project will work with the Government of PNG to improve current forestry practice and strengthen forest management to promote harvesting that is ecologically and socially sustainable. Changes in forestry policy have already been initiated to ensure greater benefits and royalties to landowners. In addition to policy dialogue, the project will help the Forest Authority strengthen its planning and monitoring role to encourage sustainable forestry management, including the initiation of independent auditing of logging operations. It will also support strengthening of landholder organizations and those environmental institutions responsible for requiring and monitoring environmental impact assessments on new and existing developments.

To promote forest conservation, there will be a comprehensive effort to improve access to information and technical advice for better informed landowner decision making. This includes the identification of alternative options to logging and the setting up of a Conservation Trust Fund to finance such options. This could include clan conservation areas, if landowners choose to follow a conservation development path in areas of high biodiversity value. The GEF will contribute \$5m to establish and test the fund mechanism and a further \$10m for capitalization, provided that other donors can mobilize equal amounts of matching capital.

In Laos a program to promote village management and regeneration of previously-logged forests is maintaining natural forests and providing rural livelihoods from certified timber. In China the Bank will provide support to the Natural Forest Protection Program,

designed to ensure the long-term protection of national forests in watershed catchments and reduce vulnerability of downstream villages and towns to flooding. After the severe floods of 1998, the Chinese government introduced a moratorium on logging and is now re-assessing

Box 3. Forest management and biodiversity conservation in Georgia

A new forest management project, financed by IDA, and a protected area project, partially funded by GEF, will work collaboratively to promote sustainable use and biodiversity conservation in Georgia's Caucasus region, a recognized global biodiversity hotspot. The two projects will work together to develop a plan for forest conservation and sustainable use in the Central Caucasus planning region, including identification of new protected areas, wildlife corridors, and land use and forest management consistent with biodiversity conservation. Special measures will be identified for conservation of threatened flora and fauna.

In eastern Georgia, management plans or management guidelines have been prepared for three key protected areas in the Caucasus mountains: Tusheti (115,800 ha) and Vashlovani National Parks (44,796 ha) and Lagodeckhi Nature Reserve; the latter will be expanded under the project from 17,932 to 25,400 ha. These protected areas cover an altitudinal gradient from 100 to 4000 meters elevation comprising alpine, montane, and lowland forest, and grasslands. The sites contain some of Georgia's most important and threatened biodiversity, including critical habitat for unique large mammal fauna.

The projects will place a particular emphasis on ecosystem management and corridor conservation. Corridor plans that link management activities within protected areas and those on adjacent state forest lands, under individual forest management units will be piloted in high priority areas, including a riparian corridor to conserve the last remaining stands of alluvial floodplain forest in eastern Georgia. The plans will focus on conserving biodiversity values in the production landscape by implementing habitat management practices (including no hunting zones) consistent with the needs of key threatened fauna such as Caucasian and Dagestan tur (mountain goats), lynx, and wolf. The plans will integrate recommendations for range management in specific alpine habitats and provide detailed performance indicators to gauge the effectiveness of management efforts. These will serve as models for replication in other forest management units under the Forestry Development Project. In the ecosystems of the central and eastern Caucasus both the wildlife and the threats they face are transboundary in nature. Therefore, responsible agencies from Russia will be invited to participate in development of the habitat plans.

its forestry programs. Approximately 50 million hectares, more than half the country's natural forests, will now be re-assessed for designation as nature reserves, forest parks, watershed forests or areas for selective logging according to their biological and protection values. The program will promote biodiversity conservation, more sustainable use and a better understanding of the critical ecosystem service role of watershed forests. In Vietnam the Bank is engaged in a partnership with government, other donors and NGOs to promote a similar program to rationalize the country's forest strategy, promote more production of timber in plantations, including those managed by communities, and assist with financing of key special use forests for biodiversity conservation.

The Bank Group's private sector arm, the International Finance Corporation (IFC), is promoting sustainable land use and improved natural resource management, through small loans under its Small and Medium Enterprise (SME) Program and investments in private sector partnerships in South America through the Terra Capital Fund. The SME fund has assisted private landowners in Belize to dedicate their properties to wildlife conservation and tourism. Natural habitats and native wildlife populations are recovering and local communities benefit from increased employment opportunities at the tourist lodges and through associated community-run tourism enterprises such as model villages and handicraft sales.

IFC financing, through Conservation International, finances small farmers to grow shade coffee in the buffer zone of the El Triunfo Biosphere Reserve, Mexico (one of the last remaining cloud forest areas in MesoAmerica). Farmers adopt certified growing practices, including agreements not to clear forest and obey land-use restrictions; the certified product is sold at a premium. In Costa Rica the IFC is supporting reforestation and natural regeneration of forests in the buffer zones of national parks within the Conservation Area of the Central Volcanic Cordillera (the ACCVC). An intermediary, FUNDECOR, finances advance wood purchases from small landowners, whom they assist to prepare reforestation and sustainable forest management plans to produce certified timber.

Benefit Sharing — Protecting Biodiversity, Alleviating Poverty

The overarching mission of the World Bank is poverty alleviation. Consistent with that mission, the Bank recognizes that biodiversity underpins human welfare and economic development and that many sectors of national and local economies depend on biological diversity, natural ecosystems, productive landscapes and the environmental services they provide. Moreover, the poorest of the poor, especially the rural poor, tend to be the most dependent on locally available forest goods and services for food, shelter, fuel, medicines, employment, income, cultural heritage, and to protect clean water supplies and reduce their vulnerability to natural hazards.

Forest ecosystems throughout the world support some of the poorest people and some of those most dependent on natural habitats and their biological resources. Yet, many of these habitats have become severely degraded and unproductive through human activities. A key challenge for the Bank is to find ways to

Box 4. Spice production in park buffer zones

ForesTrade is an American company financed by the IFC/SME program whose business activities support the conservation of biodiversity on a sustainable basis in Indonesia and Guatemala, promoting more equitable distribution of benefits. The company has developed sourcing contracts for organically grown spices and essential oils (for example, cassia cinnamon, cardamom, black pepper, ginger, patchouli and nutmeg oils) in over 60 areas involving some 3,000 individual producers and their families. Many of the partnerships are located in buffer zones of important national parks and protected areas, for example, Gunung Leuser National Park, Kerinci-Seblat N.P. and Way Kambas N. P. (Indonesia) and Maya Biosphere Reserve, El Peten and Sierra de Las Minas Biosphere Reserve (Guatemala). Suppliers must commit to forest conservation and preservation. ForesTrade provides incentives to farmers through training opportunities and payment of a small premium over market prices. The company also deals closely with NGOs, cooperatives, community groups and local consultants to ensure organic and sustainable production, harvesting techniques and yields. All products are certified.

promote development that encourages both biodiversity conservation and poverty alleviation, linking environmental protection to sustainable livelihoods.

Ecodevelopment opportunities associated with key conservation areas are enabling local communities in India to break out of the poverty trap and develop alternative livelihoods consistent with conservation objectives. In Sri Lanka and Ethiopia medicinal plant projects aim to reduce wild harvesting and support community efforts to cultivate medicinal plants to meet rural health needs. In rural Africa, in Ghana and Nigeria, the Bank is

Box 5. Information for managing forests and forest biodiversity

Information management and dissemination are important tools for improving the conservation and sustainable use of forests and forest biodiversity. Several projects focus specifically on these needs.

Regional collaboration

In the Congo Basin, the Central Africa Regional Environment Information Management Project is encouraging collaboration and information sharing between Cameroon, Central African Republic, Congo, Democratic Republic of Congo, Equatorial Guinea and Gabon for mapping and monitoring of forest resources. The project has established national and regional information networks, with a regional coordination unit established under NGO leadership.

National collections

In Indonesia the Biodiversity Collections project supported restoration and rehabilitation of the national zoological and herbarium collections as well as improved information management to provide a key database for resource management. The Costa Rica Biodiversity Resources Management Project is supporting INBIO to collect and inventory key taxa from major forest reserves. The information will be used to better 'market' biodiversity as a resource for ecotourism, research, education and sustainable exploitation, including potential pharmaceutical and horticultural uses.

Field guides

In East Asia many nationals had no direct access to information about their national flora and fauna. Although some field guides were available, these tended to be in English, expensive and largely inaccessible to a local market. Two Bank projects have specifically addressed this need for local language field guides. The Indonesia Biodiversity Collections Project, executed by the Indonesian Institute of Sciences, produced 15 books. The second project, funded by the Bank-Netherlands Partnership Program and managed by IUCN, produced 17 titles and 26 books (some titles appear in more than one language) in partnership with NGOs and academics across the region.

Publications on emerging issues

As part of its *Biodiversity Impact* series, the Bank has collaborated with Wildlife Conservation Society (WCS) to publish two new papers relevant to forest management and biodiversity conservation. The papers entitled *Biodiversity Conservation in the Context of Tropical Forest Management* and *Hunting of Wildlife in Tropical Forests* are available as pdf files on the Bank biodiversity site <<www.worldbank.org/biodiversity>>. As a follow up, the Bank is working with WCS to develop management recommendations and indicators to strengthen biodiversity criteria in forest certification processes, with a special emphasis on the regulation of hunting.

involved in projects that address problems such as land degradation, soil erosion, deforestation and loss of biodiversity through better watershed management and reforestation to improve environmental and social conditions.

Finding and exploiting such linkages across the whole World Bank Group investment portfolio will provide opportunities for mainstreaming biodiversity into national and regional sustainable development agendas.

Partnerships for Conservation and Management

The World Bank is committed to working cooperatively with diverse partners to realize the objectives of better forest conservation and management.

Innovation through the Medium Grant Window

The Medium Size Grant (MSP) facility has provided the opportunity to engage a broader range of players in GEF-financed activities and work directly with national and international NGOs, local community and indigenous organizations to support biodiversity conservation and sustainable use around the world. By the end of FY02, the Bank had 29 MSPs focusing on conservation and sustainable use in forest ecosystems.

Shade coffee and cocoa

The mid-size window is well suited for innovative high risk - high reward projects. In El Salvador, Nicaragua and Mexico, the Bank is providing incentives to farmers to maintain traditional systems of coffee production under forest cover (“shade coffee”). These agro-forestry systems provide excellent habitats and wildlife corridors, which are especially important as feeding and migration corridors for over-wintering migrant birds from North America. The coffee produced in these forested habitats is independently certified and fetches a higher premium in international markets when sold as “biodiversity-friendly coffee.” Both farmers and biodiversity benefit. In Uganda, wild coffee, harvested from protected forests surrounding Kibale National Park, will provide livelihood opportunities to local farmers who can sell their product at a premium because its production is linked to conservation of natural forests. Similarly, a GEF MSP is supporting the marketing and ecological monitoring of

“biodiversity-friendly cocoa,” produced organically to rehabilitate cocoa agroforestry areas managed by local farmers and indigenous Bribi in the Talamanca-Squirres Caribbean portion of the MesoAmerican Corridor.

Aceh elephant landscapes

In northern Sumatra, Flora and Fauna International (FFI), the government conservation agency and local student groups are working together to protect Indonesia’s largest remaining population of Asian elephants. Habitat loss, timber concessions in lowland areas and forest conversion for agriculture and plantations have increasingly brought elephants and local communities into close proximity and conflict. Surveys to identify elephant migration routes through Aceh’s forests will help NGOs and government planners to establish elephant corridors and implement appropriate land management, including establishment of new protected areas in former logging concessions. Extensive conservation awareness programs and social marketing are designed to create a constituency for conservation, building on traditional folk lore and respect for the province’s elephants. Already, the project has assisted the new autonomous government of Aceh to develop special legislation to protect elephants and their habitats.

Protecting threatened lowland swamp forests in Sumatra

The lowland forests of Sumatra are some of the most endangered habitats on Earth. With current rates of deforestation, it is estimated that they could all be lost by the year 2005. In Jambi and South Sumatra, Wetlands International are working with provincial governments and the Indonesian Conservation Department (PKA) to create a new 205,000 hectare national park. The new Sembilang park will adjoin Berbak National Park, Indonesia’s

first Ramsar site. Together the two parks will protect some of Sumatra's most important lowland forests, including large tracts of swamp forest and the most important mangroves in western Indonesia. Improved protection will provide benefits to conservation of large mammals (tiger, Sumatran rhino), migratory birds and breeding populations of rare storks. It will also benefit local economies as the mangroves are major spawning and nursery grounds for inshore fisheries.

Management of an exceptional karst landscape

Karst landscapes are an important, but rarely appreciated, facet of the Earth's biological and geological diversity with high landscape, ecological and cultural values. Levels of endemism among groups such as orchids, herbs, forest snails and cave invertebrates are generally extremely high. Such areas are poorly represented in both global protected area networks and conservation investment portfolios.

The Pu Luong-Cuc Phuong limestone range is a fine example of a karst ecosystem, the only remaining large area of lowland and limestone forest in northern Vietnam. Cuc Phuong National Park covers the eastern section of the range and was Vietnam's first national park; it is the last refuge in the region for large mammals, notably the critically endangered Delacour's langur. Pu Luong is a new nature reserve which protects the west of the range. During a forest survey in these limestone areas in 1999, 92 species of snails were found in a single plastic bag of collected soil - a world record. A GEF MSP will strengthen conservation management by establishing a new protected area to link Cuc Phuong and Pu Luong, strengthen existing protected areas and build the capacity of relevant stakeholders to manage the wider karst ecosystem through a regional landscape plan.

Old-growth temperate forests in Chile

Two medium-size projects in southern Chile will encourage conservation and sustainable use of old-growth temperate forests under pressure from unsustainable logging. The projects aim to demonstrate that these forests contribute more to national accounts through ecosystem services and recreational opportunities than through current logging practices.

Forest and ecosystem restoration on small oceanic islands

Medium-size projects in Seychelles and Mauritius are helping to protect and restore rare forest ecosystems on isolated oceanic islands. The Seychelles project focuses on management and restoration of remaining forest habitats in the Granitic Seychelles, including specific conservation measures for rare and endangered bird species in upland forests, coastal wetlands and coastal plateau forest. The Mauritius project focuses on removal of alien species and reintroduction of native flora and fauna, including the restoration of hardwood forests on the island of Rodrigues.

National Forest Programs

The Bank and its partners are supporting the development of enhanced National Forest Programs with governments and other stakeholders. Work on national forest programs is in progress in over 90 countries and will serve as a basis for building and refining priorities and moving forward to better forest management. In Vietnam, for instance, the Bank is a member of the Forest Sector Support Program in partnership with the government, other donors and NGOs.

Partnerships with Donors

The Bank's forest program has benefited in recent years from partnerships with major

**Box 6. Nicaragua —
Linking development with conservation to protect the Path of the Jaguar**

The MesoAmerican Biological Corridor, sometimes called Paseo Pantera (Path of the Jaguar), is a corridor of tropical rainforests, pine savannas, mountain forests and coastal wetlands that extends from Mexico to Colombia. In addition to the jaguar, South America's largest cat, the corridor provides habitat for thousands of other resident animals and plants, rare and threatened species such as tapirs and harpy eagles, and wintering habitat for Nearctic migratory birds. It is also home for hundreds of thousands of people, many of them indigenous tribes, who subsist from farming and harvesting forest products and other natural resources.

Within Nicaragua the corridor of natural habitats extends almost unbroken along the Atlantic coast. Soils are fragile with little agricultural potential and human population levels are low. Only 390,000 people, about 10 percent of Nicaragua's population, live in the Atlantic region. Until recently, there has been only limited exploitation of the Atlantic region's natural resources - small scale forestry, mining, fisheries and limited agriculture. However, the civil war and the ensuing peace led to resettlement of indigenous and non-indigenous communities, land allocations to retired militia and the advance of the agricultural frontier into Nicaragua's tropical forests. Pressures to open up Nicaragua for more extensive logging, mining, fishing and transport routes are further threatening the rich biological resources of the Atlantic region.

The Nicaragua Atlantic Biological Corridor Project was the first of several GEF projects in Central America prepared with the assistance of the World Bank (others include Honduras, Panama, Colombia, Guatemala and Mexico). These projects are part of a multi-national effort to conserve the Atlantic forests of Central America, an initiative supported by several donors, including a contribution of \$110 million from the GEF. The \$7.1 million GEF grant to Nicaragua is meeting the incremental costs of protected areas and conservation-based land use in the corridor as part of an integrated development and conservation project that is valued at \$30.5 million. An IDA credit will support improved agricultural productivity in the more densely populated Pacific region of Nicaragua, thus reducing out-migration to the Atlantic corridor and curbing expansion of the agricultural frontier into Atlantic forests. Within the corridor, indigenous communities will be assisted to develop livelihoods based on sustainable management of natural habitats and resources. Planning for development consistent with conservation objectives will be conducted at the regional, municipal and local level to produce development models scaled to meet local needs. By making development work to reduce pressures on native forests, the project will promote conservation of both biodiversity and ethnic cultures in one of the most intact parts of the MesoAmerican corridor.

bilateral donors, such as the Bank-Netherlands Partnership Program. In January 2002, the Program on Forests (PROFOR), a major bilateral donor partnership, moved to the World Bank. PROFOR's presence combines the technical strength, sector activities, and country dialogues of the Bank with the donors' analytical and financial resources. The move will increase PROFOR's access to the knowledge and expertise of other research and policy bodies,

including those in the CGIAR system, especially CIFOR. This partnership will strengthen efforts to align national governments' and international donors' priorities in the national forest programs under development.

Partnerships with the Private Sector

The CEO Forum, chaired by the Bank's President, has initiated a dialogue among

leading forest companies, NGOs and the Bank. The Forum was initiated as a dialogue with the chief executive officers of large forestry firms from developed and developing countries. This arrangement has since expanded to include firms from retailing and production, and some major international and southern NGOs. Through plenary meetings and working groups, the CEO Forum has debated major issues such as high conservation value forests, sustainable forest management and controlling illegal forest operations. In Africa it has led to a draft code of conduct that could have significant implications for how responsible logging companies conduct business in the region. In 2003, the Bank will expand this private sector initiative by (i) bringing some major new potential “green” investors into closer contact with some major forest borrower country governments and other stakeholders, and (ii) by partnering with Forest Trends, CIFOR and other agencies working on the development of small-scale, local, private investment in forests and forest-based enterprises.

Partnerships with NGOs

Three key NGO partnerships enrich the World Bank’s forest activities: The *World Bank-WWF Global Forest Alliance*, the *Critical Ecosystem Partnership Fund (CEPF)*, and *Forest Trends*. The CEPF is an international funding partnership between Conservation International (CI), the GEF, the World Bank, the Government of Japan and MacArthur Foundation which will provide grant funding to conservation efforts in high biodiversity areas, especially tropical forests. *Forest Trends* is a Washington-based NGO, initiated with the support of the World Bank and MacArthur Foundation. It works to develop markets for forest ecosystem goods and services, including support for sustainable livelihoods for forest-dependent peoples, and to improve the efficiency of forest product use and the development of alternative, sustainable, sources of fibre. Additionally the Bank is

Box 7. Faith and forests

Through the Bank-Netherlands Partnership Program and the Forest Alliance, the Bank is working with major faith groups in East Asia to promote faith-based stewardship of forest resources and biodiversity. Partnering with the world’s largest, most enduring and most penetrating ‘NGOs’ for conservation is overdue. In Indonesia this is being done through Islamic ‘boarding schools,’ in East Timor through the Catholic Church, in Papua New Guinea through the Evangelical Alliance, in Thailand and Cambodia through monastery schools, and in Mongolia through the main monastery and its satellites. In Mongolia, two books have been produced on sacred sites, their cultural value, and conservation, the second of which has forewords by the Prime Minister and the President of the World Bank in recognition of the importance of this approach. Late in 2002, there will be an Asia-wide multi-faith event at which projects will be showcased and experiences shared.

collaborating with other key NGOs, such as IUCN, on protected area issues; the Nature Conservancy and other NGOs on Sustainable Conservation Financing; and the World Resources Institute on the Millennium Assessment. All of these initiatives focus, at least in part, on forest ecosystems.

The Global Forest Alliance

The World Bank/WWF Alliance for Forest Conservation and Sustainable Use was formed in April 1998 as a response to the continued depletion of the world’s forest biodiversity, and of forest-based goods and services essential for sustainable development. The Alliance will work with governments, the private sector and civil society to achieve three targets by 2005:

1. 50 million hectares of new protected areas in forests

2. Another 50 million hectares of existing protected areas under effective management
3. 200 million hectares of production forests under independently certified sustainable management.

Table 7 summarizes progress to date in achieving these targets.

The Alliance is now working in 30 countries— from Brazil where the government has committed to protect an additional 28.5 million hectares of Amazon rain forest, to the Lao People’s Democratic Republic (Lao PDR), where the Alliance is helping villagers sustain the largest natural forest in Asia under active community management. The Alliance’s greatest potential lies in its ability to leverage reforms and influence ideas and the shape and financing of new endeavors. In Vietnam for example, the Alliance has already helped mobilize more than \$1 million in private-sector investment from the Tropical Forest Trust, an association of furniture buyers.

These commitments to increased forest protection involve some of the world’s most

ecologically important forest regions. Each commitment is being secured through a combination of government action, Alliance efforts to raise awareness about the importance of forest biodiversity, the provision of technical and institutional assistance, the mobilization of support from grass-roots organizations, and the leveraging of external funding.

In addition to its focus on protected areas and certification, the Alliance produces analytical tools and commissions topical research that can be used to drive international and country-specific forest policies. The Alliance has developed a diagnostic tool that enables governments and other stakeholders to assess forest estate governance and to prioritise interventions. The Alliance is also supporting the establishment of National Working Groups on Sustainable Forest Management and Forest Certification Standards, and was instrumental in the development of a global vision for 2050—a vision that sees a shift in the balance from forests as a source of fibre production to forests managed to meet the needs of local communities, as well as for their environmental and aesthetic values.

Table 7. Progress in meeting Alliance targets

<i>Region</i>	<i>Number of new PAs established</i>	<i>Area of PAs established (Ha)</i>	<i>Number of improved PAs</i>	<i>Area of improved Pas (Ha)</i>	<i>SFM/ certification</i>	<i>Area under SFM / certification (Ha)</i>
AFR	4	3,423,782	7	0	10	600,000
EAP	5	70,000	1	221,000	18	5,060,000
ECA	0	0	0	0	17	800,000
LAC	4	29,853,191	6	21,419,300	4	631,200
MNA	1	0	2	0	1	0
SAR	2	0	7	0	7	3,248,434
Grand total	16	33,346,973	23	21,640,300	57	10,339,634

Notes: PA = Protected areas; SFM = Sustainable forest management.

New Directions and Opportunities

Valuing Ecosystem Services

Forests provide multiple ecosystem, food and public health services. As well as maintaining biodiversity, they serve as buffers against the spread of disease, pollution and pests. Forest ecosystems are critical to the energy balance of the earth and can stabilize entire landscapes and coastlines. Forests also protect soils and watersheds. Forest ecosystems play a role in influencing rainfall regimes and climate at local and regional levels, helping to contain global warming through carbon sequestration and storage in soils and plant biomass. Over the last decade, a number of World Bank forest-related projects have been making explicit linkages between forest biodiversity, carbon sequestration and watershed values associated with erosion control, clean water supplies, flood control and coastal protection.

Coastal forest projects in Croatia, Bangladesh, Honduras, Lithuania, and Vietnam are improving management of coastal forests, swamps, floodplains and mangroves, including restoration of degraded habitats. Forest services, such as coastal protection and protection of fish nurseries, are increasingly being recognized as essential to these countries' coastal economies. In Ecuador and Argentina, flood control projects utilize the natural storage and recharge properties of critical forests and wetlands by integrating them into "living with floods" strategies that incorporate forest protected areas and riparian corridors. Bank watershed projects in the Middle East incorporate natural forests

and endemic riparian woodlands as part of micro-catchment vegetation management with local communities, including the Lakhdar watershed in Morocco, the northern Yemeni wadis and Turkey's Eastern Anatolia Basin. In Ecuador an integrated watershed management project is being prepared with a specific component to capture payment for environmental services provided by forests. In China forests are being increasingly recognized for their role in clean water supply. As part of the Yangtze River Protection Program in Sichuan and Hubei provinces, the Bank has funded adaptive forestry research and extension to help local communities establish nearly 300,000 ha of mixed multiple-use protection forests by planting native conifers and hardwoods, such as Chinese fir and poplar, black locust and willows.

To reduce carbon sink and biodiversity losses, long-term programs have been put in place to closely monitor and control Brazilian Amazon and Russian forest fires using state of the art technology and mobile units. In Belarus Bank support for fire management will prevent spread of radionuclide contamination through forest fires. In Africa and Central America, explicit carbon sequestration links are being made in Bank-supported efforts to conserve forest ecosystems. A sustainable energy program in Senegal will meet part of the growing urban demand for household fuels from a community-managed forest of 300,000 hectares surrounding the Niakolo-Koba National Park. It will promote improved stoves and fuel substitution to reduce overall fuel needs.

Box 8. Ecomarkets in Costa Rica

Payments for Forest Ecological Services is an alternative approach to encouraging the conservation and restoration of forest ecosystems. Land owners receive direct payments for the ecological services they produce when they adopt land uses and forest management techniques that protect the environment. Costa Rica's Forest Law recognizes four environmental services provided by forest ecosystems: (1) mitigation of GHG emissions; (2) hydrological services, including provision of water for human consumption, irrigation, and energy production; (3) biodiversity conservation; and (4) provision of scenic beauty for recreation and ecotourism.

The Costa Rican Payments for Environmental Services Program (PESP), which is executed through the Fondo Nacional de Financiamiento Forestal (FONAFIFO) and the Sistema Nacional de Areas de Conservación (SINAC), aims to protect primary forest, allow secondary forest to flourish, and promote forest plantations to meet industrial demands for lumber and other wood products. These goals are met through site-specific contracts of payments for ecological services with individual farmers. In all cases, participants must present a forest management plan certified by a licensed forester, as well as carry out conservation or sustainable forest management activities (depending on the type of contract) throughout the life of individual contracts. Management plans include *inter alia* information on land cadastre, cartography, and physical access; description of topography, soils, climate, drainage, actual land use, and carrying capacity with respect to land use; plans for prevention of forest fires, illegal hunting, illegal harvesting; and monitoring schedules.

Commitments associated with the environmental service contracts are registered with the deed to the property, such that contractual obligations transfer as a legal easement to subsequent owners for the life of the contract. Furthermore, landowners cede their GHG emissions reductions rights to FONAFIFO to sell on the international market. It should be noted that the PES program sets different regulations for indigenous territories. Experience indicates that indigenous territories have clear land boundaries but they do not always hold titles to their land nor have legally established associations as representative of the territory. As a result, FONAFIFO exempts indigenous territories from complying with land ownership regulations.

The PES program provides market-based incentives to conserve natural forest ecosystems. These economic incentives help maintain habitats that are critical to a rich, globally important biodiversity, and have the potential for helping to maintain biological corridors linking national parks and biological reserves. Since 1997, nearly 320,000 hectares of forests have been incorporated into the program at a cost of approximately US\$68 million. The Bank is supporting this program in areas of high biodiversity.

In Costa Rica the Bank is providing financing from the GEF and the Prototype Carbon Fund to fund the Ecomarkets Project—Box 8.

Ecomarkets will increase the production of environmental services by supporting the development of markets for services supplied by private sector forests, including protection of biological diversity, greenhouse gas mitigation, and provision of hydrological services. The project will foster biodiversity conservation and

preserve important forest ecosystems through conservation easements on privately-owned lands outside protected areas in the Mesoamerican Biological Corridor in Costa Rica.

The Prototype Carbon Fund and the BioCarbon Fund

The Bank's Prototype Carbon Fund (PCF) has been developed to provide a framework for

action learning and research to demonstrate how project-based greenhouse gas emission reduction transactions can contribute to sustainable development and lower the costs of compliance with the Kyoto Protocol. It provides opportunities to develop markets for carbon emissions reductions under both the Joint Implementation (JI) and Clean Development Mechanism (CDM) that are emerging from the United Nations Framework Convention on Climate Change (UNFCCC).

One of the Fund's early projects is supporting an innovative fuel substitution project in Brazil that is also producing biodiversity benefits. The Plantar properties in the state of Minas Gerais, will produce charcoal for pig iron smelting with new plantations of high-productivity, clonal *Eucalyptus* stands, but the plantation area also supports areas of *cerrado* savannas in various stages of recovery. The global biodiversity value of *cerrado* ecosystems is high. The Plantar project will allow the recovery of natural *cerrado* ecosystems on Plantar lands because of fire suppression and cessation of grazing on those degraded *cerrados* that have been acquired to establish each property's legal reserve (20 percent of the property), and those that will be acquired during the project life period.

Additional biodiversity benefits include the establishment of biological corridors between fragments of natural vegetation; the acceleration of natural recovery processes through planting of succession-facilitating tree species; and fire suppression on surrounding properties. These benefits are measurable and are expected to provide additional returns to project investors.

Under its governing articles, the Prototype Carbon Fund can only invest a maximum of 10 percent of its funds in activities focused on land use, land use change and forestry (LULUCF). This mirrors developments under the Kyoto Protocol where reforestation and afforestation have now been recognized as eligible activities for emissions reduction trading under the CDM.

However, deforestation and other land use activities also have a significant effect on the global carbon cycle (see Watson *et al*, 2000). As a result, the Bank is currently taking steps to establish a new BioCarbon Fund to promote action learning about the potential role LULUCF activities might play under the UNFCCC and other conventions.

The BioCarbon fund will develop understanding about the nexus between climate change, biodiversity conservation and management and desertification and land degradation. It will involve both a "Kyoto Eligible" window and an "Over the Horizon" window to explore synergies between the various international environmental treaties and agreements. The BioCarbon Fund should have a similar capitalization to the Prototype Carbon Fund (currently \$180 million) and will support action learning projects in areas such as improved forest management, agroforestry, avoiding deforestation, improved agricultural practices, the prevention of land degradation, wetlands protection and restoration and watershed management.

Improving Forest Governance

Meeting in Bali in September, East Asian ministers committed their countries to combat illegal logging, associated illegal trade, and other forest crimes. Approximately 150 participants, including representatives of government institutions, NGOs and the private sector, contributed to the conference. The declaration represents the first ever, international commitment by governments to combat corruption in the forestry sector. The Bali conference was co-hosted by the World Bank and the Government of Indonesia and organized by the World Bank Institute (WBI). It achieved a number of significant firsts:

- A forum for collaborative dialogue among national and international NGOs and other stakeholder groups
- Recognition by the G-8 countries of consumer country responsibility to join with producer countries to combat forest crimes
- A regional ministerial declaration expressing political commitment and a call for action at the highest levels to stop illegal logging.

The Bank will work with governments and other donors to support follow-up actions arising from the conference.

From Rio to Johannesburg

There have been three critical junctures for the World Bank and its work on forests in the decade since the Earth Summit in Rio in 1992: (1) the commitments made at the United Nations General Assembly Special Session (UNGASS or Rio + 5), (2) the Review of the World Bank's 1991 Forest Strategy and its Implementation, completed by the World Bank's Operations Evaluation Department (OED) in 2000, and (3) the Forest Policy Implementation Review and Strategy, including a revised forest strategy, completed in 2002.

The OED study recommended that the World Bank expand its policy to include interventions in all forest areas and refocus its forest strategy on poverty reduction, economic management, and good governance. Concurrent with the OED evaluation, the Bank's forest team engaged in a review of the Forest Policy and a revision of the Forest Strategy, shaped in consultation with stakeholders worldwide. The revised Forest Strategy is aligned with the emerging Bank instruments in programmatic lending, including the poverty reduction programs and credits. It proposes a hierarchy of engagement in countries that is built on enhanced National Forest Programs and founded on the

Comprehensive Development Framework and the Poverty Reduction Strategy Programs. The new strategy aligns the Bank's forest activities with the World Bank's major institutional objectives by:

- *Harnessing the potential of forests to reduce poverty* by creating opportunity, empowerment and security for rural people, especially among indigenous groups and the rural poor, in the sustainable use and management of forests.
- *Integrating forests into sustainable economic development* by addressing the under-valuation, governance failures and perverse incentives that plague the sector. Future activities will focus on developing markets for environmental services, encouraging good forest management, improving governance including control of illegal activities, promoting active participation in management decision-making by all stakeholders, and managing adverse cross-sectoral and macroeconomic impacts on forest resources.
- *Protecting vital local and global environmental services and values* by working to create effective markets for global values and other positive externalities from forests—markets that will provide incentives for both local and national stakeholders to protect and manage the resource (Box 9).

The Bank's new Forest Strategy places increased emphasis on issues of *governance* and *participation*. Forest certification—or the independent auditing of forest management according to pre-established standards—is an important component of this. Essential elements of the certification process encourage good governance in the forest sector by including stakeholders in the definition of management standards, balancing the ecological, economic and equity dimensions of forest management, and developing independent and credible reporting mechanisms.

Box 9. Incentives for rainforest conservation — Ranching poison dart frogs in Peru

A major cause of loss of rainforests is clearance for agriculture and shifting cultivation. In Peru, an innovative solution is being tested to enable local people to earn a sustainable income from intact rainforest, an income that is substantially higher than they could earn from converting forest to agricultural lands.

The income is generated from the sale of poison dart frogs, beautiful amphibians that live in the rainforests of Latin America. Throughout Latin America, there are about 400 different species and varieties of these frogs, all spectacularly colored, diurnal and with interesting behavior. They fetch a high price in the international pet trade (retail prices range from \$50 to \$350) with large markets in the U.S.A, Europe and Japan while exports have also gone to South Africa and Australia. The pharmaceutical industry is also interested. From the skin secretion of one species, a chemical has been isolated that is much more effective as a painkiller than morphine and not addictive. Furthermore, research is being done in France on possible curative properties of the frog skin secretions for *Leishmaniasis* and malaria.

All poison dart frogs are on CITES Appendix 2 as endangered species that can only be exported if it can be shown that the export does not harm the wild population. The project therefore will not allow the sale of wild-caught frogs; it will only sell frogs that have been sustainably produced as a “surplus” by the wild population. Poison dart frogs live in the trees where the females lay only a few eggs which they glue to a leaf. The males often guard and water the eggs and when the tadpoles hatch the males carry them on their back to a small water body, usually in the leaf axils of certain host plants (usually one tadpole per axil as many species are cannibalistic). The male shows the female where he has put the tadpoles. She feeds them unfertilized eggs that she lays as a reaction to the tadpole nibbling her behind. Tadpoles of some species also feed on mosquito larvae, thereby helping to control transmission of mosquito-borne diseases.

Research has shown that the limiting factor to the population is the number of suitable breeding sites. Males are territorial and need a breeding site to establish a territory. By providing artificial breeding sites in the trees (plastic soft drink bottles cut in half and filled with water), the number of frogs and their breeding success can be greatly increased. Since bottles contain more water than leaf axils they are also less likely to dry out and tadpole survival is high in the bottles. The “surplus” young can be harvested from the bottles, put in grow-out cages on the forest floor and exported as juvenile frogs. The project will only allow for the export of juveniles and promote legislation to this effect to combat the illegal export of wild caught poison dart frogs (always adults caught when the males are calling). Juveniles are silent and almost impossible to find in the wild.

A small NGO has been founded in Peru that has been trained in dart frog “ranching.” This NGO has committed itself to protecting the rainforest; its activities serve as a pilot demonstration for a larger project to be funded by the IFC and GEF. The model is replicable for other sites and species. The NGO has also won funding from the World Bank’s 2002 Innovation in the Marketplace contest.

Challenges for the Future

The Bank has a large and expanding forest biodiversity portfolio. A major challenge for the future will be how to mainstream biodiversity into normal development lending and poverty alleviation programs, (promoting positive

synergies), while minimising the potential negative impacts of non-forest sector lending on forests and forest biodiversity, (doing no harm).

It is now acknowledged that the impacts on forests and forest-dependent people of policy reforms and investments *outside* of the forest

sector is of equal, or even greater, significance than targeted forest sector activities. Non-forest interventions, such as rural development and infrastructure programs and projects and economic adjustment measures, must be carefully formulated to avoid serious negative impacts on forests and forest biodiversity. In addition to the Bank's current operational directive to protect natural habitats (O.D. 4.04), a new Forests Operational Policy is in preparation to ensure adequate safeguards for forest ecosystems and forest-dependent peoples.

The Policy will encourage Bank staff and clients to proactively seek opportunities to integrate

the main elements of the new strategy for forests into the Bank's broader poverty reduction, rural development, (including integrated natural resource management), and environment strategies. Poverty Reduction Strategy Papers (PRSPs) are an important avenue for engagement and forest information should be factored into the broader proposals for poverty reduction. Ensuring that poverty alleviation programs are consistent with biodiversity conservation and sustainable use of forests will promote quality of growth and protect vital environmental services, both locally and globally.

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Annex 1 — Forest Biodiversity Projects, 1992–2002

Forest biodiversity project investments							Biodiversity activities										
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10	
<i>GLOBAL 2 Projects</i>																	
Global	Small and Medium Scale Enterprise Program	1997	GEF IFC	40.00	20.00	2.00									*	*	*
Global	Critical Ecosystems Partnership Fund	2001	GEF REG DGF	125.00	125.00	51.50	*	*	*		*	*	*	*	*	*	*
<i>AFRICA REGION: 31 Projects, 6 Blended: GEF-IDA</i>																	
Benin	Natural Resource Management	1992	IDA	24.40	1.70	0.99	*	*	*			*	*	*			
Benin (a)	National Parks Conservation and Management Program	2000	GEF REG	23.90	23.90	6.80	*					*	*				
Benin	Management of Forests and Adjacent Lands	2002	GEF REG	27.00	27.00	6.00	*							*	*		
Burkina Faso (a)	Community-Based Rural Development	2001	IDA	114.85	3.82	2.22							*	*	*		
Cameroon	Biodiversity Conservation and Management	1995	GEF REG	12.39	12.39	5.96	*	*	*			*	*				*

Note: (a) Projects that dedicate small investments toward forest ecosystems.

Legend — Biodiversity Activities

- | | |
|--|---|
| 1. Institution-Building, Policies and Strategic Planning | 6. Strengthening Existing Protected Areas |
| 2. Improving Biodiversity Information | 7. Development and Biodiversity Management in Park Buffer Zones |
| 3. Public Awareness Raising | 8. Biodiversity Management in Production Landscapes |
| 4. Ex-situ Biodiversity Conservation | 9. Sustainable Financing and Market Mechanisms |
| 5. Establishment of New Protected Areas | 10. Ecotourism |

Biodiversity Conservation in Forest Ecosystems — World Bank Assistance 1992–2002

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Chad	Household Energy	1998	IDA	6.31	1.36	1.14			*					*	*	
Congo	Wildlands Protection and Management	1993	GEF REG	13.90	13.90	10.10	*	*	*			*	*	*		
Eritrea	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.28	0.28	0.28	*	*								
Ethiopia (a)	Conservation and Sustainable Use of Medicinal Plants	2001	GEF REG	1.81	1.81	1.81			*			*	*			
Ethiopia (a)	Conservation and Sustainable Use of Medicinal Plants	2001	IDA LIL	3.37	3.37	0.78	*	*		*					*	
Gabon	Forestry and Environment	1993	IDA	38.20	12.44	6.44	*	*				*				
Ghana (a)	Environmental Resource Management	1993	IDA	27.60	0.99	0.66	*	*	*							
Ghana	Natural Resource Management I	1998	GEF REG	9.40	9.40	8.70	*	*	*		*	*			*	*
Ghana	Natural Resource Management I	1998	IDA	23.60	14.30	9.30	*	*	*				*	*	*	
Kenya	Tana River National Primate Reserve	1997	GEF REG	7.14	7.14	6.20		*	*			*	*			
Kenya	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.16	0.16	0.16	*	*								
Madagascar (a)	Second Environment Program	1997	GEF REG	20.80	20.80	12.80	*	*	*		*	*	*		*	*
Madagascar (a)	Second Environment Program	1997	IDA	134.20	56.00	12.52	*	*	*					*		
Malawi	Mulanje Biodiversity Conservation	2001	GEF REG	8.02	8.02	6.75		*	*			*	*		*	*
Mali (a)	Natural Resource Management	1992	IDA	32.10	6.78	4.31	*	*	*		*	*	*	*		
Mauritius	Biodiversity Restoration	1996	GEF REG	1.60	1.60	1.20	*	*	*	*				*		

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Mozambique (a)	Transfrontier Conservation Areas Pilot and Institutional Strengthening	1997	GEF REG	8.10	8.10	5.00	*	*	*		*	*				
Nigeria	Micro-watershed and Environmental Management Program	2002	GEF REG	8.00	8.00	8.00	*	*				*				
Nigeria	Micro-watershed and Environmental Management Program	2002	IDA	107.35	12.88	12.00	*	*	*				*	*	*	
Regional - Central Africa	Regional Environment and Information Management Project - REIMP	1997	GEF REG	19.76	19.76	4.08	*	*	*							
Regional - Ivory Coast and Burkina Faso (a)	West Africa Pilot Community-Based Natural Resource and Wildlife Management	1996	GEF REG	13.19	13.19	7.00	*	*	*					*	*	*
Senegal	Sustainable and Participatory Energy Management	1997	IDA	4.70	4.70	4.70							*	*		
Senegal	Sustainable and Participatory Energy Management	1997	IDA	15.20	4.38	1.50	*	*	*							
Seychelles	Management of Avian Ecosystems in Seychelles	1999	GEF MSP	1.06	1.06	0.74	*	*	*	*		*				*
Uganda	Conservation of the Bwindi Impenetrable and Mgahinga Gorilla National Parks	1995	GEF REG	4.89	4.89	4.00	*	*	*			*	*		*	*
Uganda	Environmental Management Capacity Building	1996	IDA	15.20	1.38	1.08	*	*								
Uganda	National Biodiversity Strategy and Action Plan	1998	GEF EA	0.13	0.13	0.13	*	*								

Forest biodiversity project investments							Biodiversity activities										
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10	
Uganda	Kibale Forest Wild Coffee	1999	GEF MSP	0.75	0.75	0.75		*	*				*	*		*	*
Uganda (a)	Institutional Capacity Building for Protected Areas Management and Sustainable Use ICB-PAMSU	1999	GEF REG	2.00	2.00	2.00	*						*	*			
Uganda (a)	Institutional Capacity Building for Protected Areas Management and Sustainable Use ICB-PAMSU	1999	IDA	18.29	18.29	12.37	*							*			*
Uganda (a)	Environment Management and Capacity Building II	2002	IDA	15.40	1.38	1.08	*	*	*								
Uganda (a)	Indigenous Knowledge	2002	IDA IDF	0.43	0.43	0.43		*									
EAST ASIA AND PACIFIC REGION: 24 Projects, 3 GEF-IDA, 2 GEF-IBRD																	
Cambodia	Forest Concession Management and Control	2000	IDA	5.42	1.10	0.98	*	*									
Cambodia	Biodiversity and Protected Areas Management	2001	GEF REG	3.00	3.00	2.75	*	*	*				*	*		*	
Cambodia	Biodiversity and Protected Areas Management	2001	IDA LIL	1.91	1.91	1.91	*	*	*				*	*		*	
China	Biodiversity Conservation Action Plan	1993	GEF EA	0.40	0.40	0.40	*	*									
China (a)	Environmental Technical Assistance	1993	IDA	76.00	29.40	20.00	*	*									
China	Forest Resource Development and Conservation	1994	IDA	333.10	20.55	12.34	*	*	*					*	*		
China	Nature Reserves Management	1995	GEF REG	23.60	23.60	18.40	*	*	*		*	*	*	*	*	*	*
Indonesia	Biodiversity Collections	1994	GEF REG	11.40	11.40	7.20	*	*	*								

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Indonesia	Integrated Swamps Development	1994	IBRD	106.00	3.10	1.89	*					*				
Indonesia	Kerinci Seblat ICDP	1996	GEF REG	15.00	15.00	15.00		*				*	*			
Indonesia	Kerinci Seblat ICDP	1996	IBRD	32.20	32.20	19.20	*		*				*			
Indonesia	Conservation of Elephant Landscape in Aceh Province, Sumatra	2000	GEF MSP	1.04	1.04	0.74	*	*	*		*			*		
Indonesia	Biodiversity Strategy and Action Plan - IBSAP 2	2000	GEF EA	0.44	0.44	0.44	*	*								
Indonesia	The Greater Berbak-Sembilang Integrated Coastal Wetlands Conservation	2001	GEF MSP	1.60	1.60	0.73	*	*	*		*	*		*		
Indonesia	Forests and Media Project - INFORM	2002	GEF MSP	1.23	1.23	0.94			*							
Indonesia	Conservation of Key Forests in the Sangihe-Talaud Islands	2002	GEF MSP	1.14	1.14	0.84	*		*			*	*	*		
Lao PDR	Wildlife and Protected Areas Conservation	1994	GEF REG	5.00	5.00	5.00		*	*		*	*	*			
Lao PDR	Forest Management and Conservation	1994	IDA	15.30	7.75	4.35	*	*					*	*	*	
Lao PDR	Land Titling	1996	IDA	28.40	0.60	0.44		*								
Lao PDR	District Upland Development and Conservation	1999	IDA LIL	2.25	2.25	2.00		*	*			*	*		*	
Mongolia	Dynamics of Biodiversity Loss and Permafrost Melt in Lake Hovsgol NP	2001	GEF MSP	0.98	0.98	0.83		*								
Papua New Guinea	National Biodiversity Strategy and Action Plan	1999	GEF EA	0.18	0.18	0.18	*	*								
Papua New Guinea	Forestry and Conservation	2002	GEF REG	17.30	17.30	17.30	*	*	*					*	*	

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Papua New Guinea	Forestry and Conservation	2002	IBRD	22.10	11.05	8.68	*	*					*	*	*	
Philippines	Conservation of Priority Protected Areas	1994	GEF REG	22.86	22.86	20.00	*	*	*			*	*	*	*	
Philippines	Land Administration and Management	2001	IBRD LIL	10.35	2.54	1.18	*	*								
Vietnam	Forest Protection and Rural Development	1998	IDA	32.39	32.39	21.51			*			*	*	*		*
Vietnam (a)	Coastal Wetlands Protection and Development	2000	IDA	65.60	15.00	7.27		*	*			*	*	*		
Vietnam	Conservation of Pu Luong-Cuc Phuong Limestone Landscape	2001	GEF MSP	1.31	1.31	0.75	*	*	*			*	*	*		
EAST AND CENTRAL EUROPE REGION: 30 Projects, 1 GEF-IBRD, 1 GEF-IDA																
Albania	Forestry	1996	IBRD	21.60	4.15	1.54	*	*	*		*	*		*	*	
Albania	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.96	0.96	0.96	*	*								
Belarus	Forest Biodiversity Protection	1993	GEF REG	1.25	1.25	1.00	*	*	*	*		*				*
Belarus	Forestry Development	1994	IBRD	54.70	2.13	0.50	*	*								
Bosnia-Herzegovina	Forestry	1998	IDA	20.20	1.85	0.64	*				*	*				
Bosnia-Herzegovina	Environmental Capacity Building	2000	IDA IDF	0.29	0.15	0.15	*									
Croatia	Coastal Forest Reconstruction and Protection	1997	IBRD	67.00	34.23	21.45								*		*
Croatia	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.10	0.10	0.10	*	*								
Czech Republic	Biodiversity Protection	1994	GEF REG	2.75	2.75	2.00						*			*	*
Czech Republic	National Biodiversity Strategy and Action Plan	1998	GEF EA	0.10	0.10	0.10	*	*								

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Georgia	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.12	0.12	0.12	*	*								
Georgia	Forest Development	2001	IDA	21.15	21.15	20.00	*	*	*			*	*	*		
Georgia	Protected Areas Development	2001	GEF REG	8.70	8.70	8.70	*	*	*		*	*	*	*	*	*
Kyrgyzstan	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.11	0.11	0.11	*	*								
Lithuania	Klaipeda Environment	1995	IBRD	23.10	1.50	1.50						*				*
Lithuania	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.07	0.07	0.07	*	*								
Moldova	National Biodiversity Strategy and Action Plan	1998	GEF EA	0.13	0.13	0.13	*	*								
Moldova	Biodiversity Conservation in the Lower Dniester River	2002	GEF MSP	2.00	2.00	1.00	*	*	*		*	*	*	*	*	*
Poland	Biodiversity Protection	1992	GEF REG	6.20	6.20	4.50	*	*		*		*		*		
Poland	Forestry Development	1994	IBRD	335.40	14.00	2.00	*			*		*				
Regional Central Asia: Kyrgyz Kazakhstan, Uzbekistan (a)	Central Asia Transboundary Biodiversity	1999	GEF REG	13.65	13.65	10.15	*	*	*		*	*	*			*
Romania	Biodiversity Conservation	1999	GEF REG	8.80	8.80	5.50	*		*			*				*
Russia	Biodiversity Conservation	1996	GEF REG	26.00	26.00	20.10	*	*				*		*		
Russia	Sustainable Forestry Pilot	2000	IBRD	74.50	20.35	16.39	*	*						*	*	
Slovak Republic	Biodiversity Protection	1994	GEF REG	2.86	2.86	2.17	*	*	*			*			*	*

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Slovak Republic	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.08	0.08	0.08	*	*								
Slovenia	National Biodiversity Strategy and Action Plan	1998	GEF EA	0.09	0.09	0.09	*	*								
Turkey	Eastern Anatolia Watershed Rehabilitation	1993	IBRD	109.80	7.76	5.44		*						*		
Turkey (a)	In-Situ Conservation of Genetic Biodiversity	1999	GEF REG	5.70	5.70	5.10	*	*		*	*		*			
Turkey (a)	Biodiversity and Natural Resource Management	2000	GEF REG	11.54	11.54	8.19	*	*	*			*	*	*		*
Ukraine	Transcarpathian Biodiversity Protection	1994	GEF REG	0.58	0.58	0.50	*	*	*			*	*		*	
Ukraine	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.12	0.12	0.11	*	*								
LATIN AMERICA AND CARRIBEAN REGION: 91 Projects, 7 Blended GEF-IBRD																
Argentina	Forestry Development	1996	IBRD	26.20	7.62	4.65	*	*						*		
Argentina (a)	Flood Protection	1997	IBRD	488.00	3.60	1.48			*			*		*		
Argentina	Native Forests and Protected Areas	1997	IBRD	30.00	30.00	19.50	*	*	*	*		*				
Argentina (a)	Biodiversity Conservation	1998	GEF REG	21.90	21.90	10.10		*			*		*			*
Argentina (a)	Indigenous Community Development	2001	IBRD LIL	5.88	2.94	2.50	*							*		*
Belize	Northern Belize Biological Corridors Consolidation and Maintenance	1999	GEF MSP	3.91	3.91	0.75	*	*	*			*	*	*	*	
Belize	Community Managed Sarstoon Temash Conservation	2001	GEF MSP	7.52	7.52	0.75		*	*			*	*			*

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Bolivia	Biodiversity Conservation	1993	GEF REG	7.60	7.60	4.50	*				*	*	*		*	*
Bolivia	National Land Administration	1995	IBRD	60.40	0.50	0.50		*								
Bolivia	Sustainability of the National System of Protected Areas	2001	GEF REG	43.69	43.69	15.00	*	*				*	*		*	*
Bolivia	Indigenous Development	2001	IBRD LIL	5.00	1.11	1.11			*					*		*
Bolivia	National Land Administration - Supplemental	2002	IBRD	6.00	0.05	0.05		*								
Brazil (a)	Mato Grosso Natural Resource Management	1992	IBRD	285.70	48.50	44.70		*	*		*					
Brazil	Rondonia Natural Resource Management	1992	IBRD	228.90	38.70	35.90	*		*		*	*				
Brazil	Demonstrations	1995	RFTF	22.00	22.00	22.00	*		*					*	*	*
Brazil	Extractive Reserves	1995	RFTF	9.70	9.70	9.70			*			*	*			
Brazil	Indigenous Lands	1995	RFTF	20.90	20.90	20.90		*						*		
Brazil	Natural Resources Policy	1995	RFTF	79.00	79.00	79.00	*	*								
Brazil	Science Centers and Directed Research	1995	RFTF	15.10	15.10	15.10		*								
Brazil	Environmental Conservation and Rehabilitation	1996	IBRD	109.00	10.90	5.00		*				*		*		
Brazil	Biodiversity Fund and National Biodiversity Project PROBIO	1996	GEF REG	54.50	54.50	30.00	*	*	*	*		*	*		*	*
Brazil	Forest Resources Management	1997	RFTF	2.00	2.00	2.00	*	*				*		*	*	*
Brazil	Gas Sector Development	1998	IBRD	2086.00	8.40	0.52						*				
Brazil	Bahia Water Resources Management	1998	IBRD	85.00	6.87	4.10	*	*	*		*			*		

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Brazil	Federal Water Resources Management - PROAGUA	1998	IBRD	330.00	0.63	0.38			*					*		
Brazil (a)	Land Management III: Sao Paolo	1998	IBRD	124.70	10.72	4.73			*					*	*	
Brazil	Fire Prevention and Mobilization	1999	RFTF	2.00	2.00	2.00	*	*	*					*		
Brazil	Fire Prevention and Mobilization in the Amazon - PROARCO	1999	IBRD	20.00	20.00	15.00	*	*	*					*		
Brazil	Monitoring and Analysis	1999	RFTF	5.80	5.80	5.80		*								
Brazil	Fire Prevention and Mobilization in the Amazon PROTEGER 2	2001	RFTF	2.00	2.00	2.00	*	*	*							
Brazil	Amazon Region Protected Areas - AMAZON 2000	2002	GEF REG	68.00	68.00	30.00	*	*			*		*		*	
Brazil	Rain Forest Ecological Corridors	2002	RFTF	46.50	46.50	46.50	*	*	*		*	*	*	*	*	
Chile (a)	Environmental Institutions Development	1993	IBRD	32.80	16.40	5.75	*	*								
Chile	Valdivian Forest Zone: Private Public Mechanisms for Biodiversity Conservation	2001	GEF MSP	0.73	0.73	0.73	*	*	*			*	*		*	
Colombia (a)	Natural Resource Management Program	1994	IBRD	65.30	11.60	6.93	*	*	*			*				
Colombia	Sustainable Use of Biodiversity in Western Slope of Serrania del Baudo (Choco)	1999	GEF MSP	2.96	2.96	0.73	*	*	*		*	*	*	*	*	*
Colombia	Toll Road Concession	1999	IBRD	572.30	1.70	0.00					*					

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Colombia	Sierra Nevada Sustainable Development	2000	IBRD LIL	6.25	6.25	5.00	*	*	*			*	*	*		*
Colombia	Conservation and Sustainable Development of the Mataven Forest	2001	GEF MSP	1.39	1.39	0.75	*	*	*					*		*
Colombia	Andean Region Conservation and Sustainable Use of Biodiversity	2001	GEF REG	30.00	30.00	15.00	*	*				*	*		*	*
Costa Rica (a)	Training Program for Sustainable Development of Indigenous People	1995	IBRD IDF	0.12	0.06	0.06			*				*			
Costa Rica (a)	Institutional Strengthening on Gender in Natural Resource Management and Agriculture	1998	IBRD IDF	0.40	0.20	0.20	*		*							
Costa Rica	Biodiversity Resources Development	1998	GEF REG	11.00	11.00	7.00	*	*				*	*		*	
Costa Rica (a)	Training Program for Sustainable Development of Indigenous People	2000	IBRD IDF	0.30	0.15	0.15			*				*			
Costa Rica	EcoMarkets	2000	IBRD	41.20	27.47	21.53	*	*	*				*	*	*	
Costa Rica	EcoMarkets	2000	GEF REG	8.00	8.00	8.00	*	*	*				*	*	*	
Costa Rica	Sustainable Cacao Production in Southeastern Costa Rica	2001	GEF MSP	3.01	3.01	0.72	*	*						*	*	
Dominican Republic	National Environmental Policy Reform	1998	IBRD LIL	3.70	1.95	1.58	*		*							*
Dominican Republic	National Biodiversity Strategy and Action Plan	1998	GEF EA	0.25	0.25	0.25	*	*								

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Ecuador	Rural Development	1992	IBRD	112.70	1.93	1.44	*	*	*			*				
Ecuador	Biodiversity Protection	1994	GEF REG	8.70	8.70	7.20	*	*	*			*	*			*
Ecuador (a)	Indigenous and Afro-Ecuadorian Peoples Development	1998	IBRD	50.00	6.91	3.47	*	*	*		*			*		*
Ecuador	Wetland Priorities for Conservation Action	1999	GEF MSP	0.91	0.91	0.72	*	*	*							
Ecuador	Choco-Andean Corridor	2001	GEF MSP	3.19	3.19	0.98	*		*		*		*			
El Salvador	Promotion of Biodiversity Conservation with Coffee Landscapes	1998	GEF MSP	3.81	3.81	0.73		*	*					*	*	
Grenada	Dry Forest Biodiversity Conservation	2001	GEF MSP	1.13	1.13	0.72	*	*	*			*	*		*	
Guatemala	Management and Protection of Laguna del Tigre National Park	2000	GEF MSP	1.66	1.66	0.72		*				*	*			
Guatemala	Western Altiplano Integrated Natural Resource Management	2001	GEF REG	8.00	8.00	8.00		*				*	*			
Guatemala	Western Altiplano Integrated Natural Resource Management	2001	IBRD	43.14	43.14	12.77	*							*		
Haiti	Forest and Parks Protection Technical Assistance	1997	IDA	22.50	22.50	21.50	*					*	*			
Haiti	National Biodiversity Strategy and Action Plan	1998	GEF EA	0.26	0.26	0.26	*	*								
Honduras (a)	Environmental Development	1995	IDA	12.48	2.50	2.16	*		*					*	*	
Honduras (a)	Rural Land Management	1997	IDA	41.80	17.25	14.03	*		*			*	*	*		

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Honduras	Biodiversity in Priority Areas	1998	GEF REG	9.50	9.50	7.00	*	*				*	*			
Honduras (a)	Interactive Environmental Learning and Science Promotion	1999	IDA	9.30	2.33	2.08			*			*				*
Mexico (a)	Environmental Project	1992	IBRD	49.37	10.88	4.30	*							*		
Mexico	Protected Areas Program	1992	GEF REG	10.70	10.70	8.70	*	*				*				*
Mexico (a)	Northern Border Environmental Project	1994	IBRD	762.00	15.00	7.24	*									
Mexico	Community Forestry	1997	IBRD	23.57	9.90	6.30	*		*					*	*	
Mexico	Protected Areas Program: Proposed Restructuring	1997	GEF REG	34.55	34.55	17.48	*					*	*		*	
Mexico	Sustainable Hill-Side Management in Indigenous Micro-catchments in Oaxaca	1999	GEF MSP	0.72	0.72	0.50		*						*		
Mexico	Indigenous and Community Biodiversity Conservation COINBIO	2001	GEF REG	7.50	7.50	7.50	*	*	*		*		*			*
Mexico	Indigenous and Community Biodiversity Conservation COINBIO	2001	IBRD	11.20	11.20	2.60	*							*	*	*
Mexico	Natural Disaster Management	2001	IBRD	658.30	1.28	0.78		*							*	
Mexico	Mesoamerican Biological Corridor	2001	IBRD	76.61	76.61	4.20	*							*		
Mexico	Mesoamerican Biological Corridor	2001	GEF REG	14.92	14.92	14.92		*	*				*			*

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Mexico	El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes	1999	GEF MSP	2.12	2.12	0.73		*	*				*		*	
Mexico	Consolidation of Protected Areas SINAP II	2002	GEF REG	60.12	60.12	16.10	*	*	*			*	*	*	*	*
Nicaragua	Atlantic Biological Corridor	1997	GEF REG	7.10	7.10	7.10	*	*				*	*			
Nicaragua	Rural Municipalities	1997	IBRD	40.40	7.65	5.68	*		*				*	*		*
Nicaragua	Sustainable Forestry Investment Promotion	1999	IDA	15.00	7.50	4.50	*	*	*					*	*	
Nicaragua	Barrier Removal and Forest Habitat Conservation (Coffee/Allspice)	2001	GEF MSP	12.08	12.08	0.73			*				*			
Panama	Rural Poverty and Natural Resources	1997	IBRD	27.30	3.20	3.00	*	*					*	*		
Panama	Atlantic Mesoamerican Biodiversity Corridor	1998	GEF REG	12.80	12.80	8.40	*	*	*			*	*			*
Panama	Effective Protection with Community Participation of San Lorenzo Protected Area	2000	GEF MSP	2.23	2.23	0.73	*		*		*		*		*	*
Paraguay (a)	Natural Resources Management	1994	IBRD	79.10	14.83	9.38	*	*		*	*	*	*	*		*
Peru	Trust Fund for Parks and Protected Areas	1995	GEF REG	7.86	7.86	5.00	*		*			*	*		*	
Peru	Collaborative Management for the Conservation and Sustainable Development of the Northwest Biosphere Reserve (Tumbes)	2000	GEF MSP	2.07	2.07	0.73	*	*	*			*	*			*

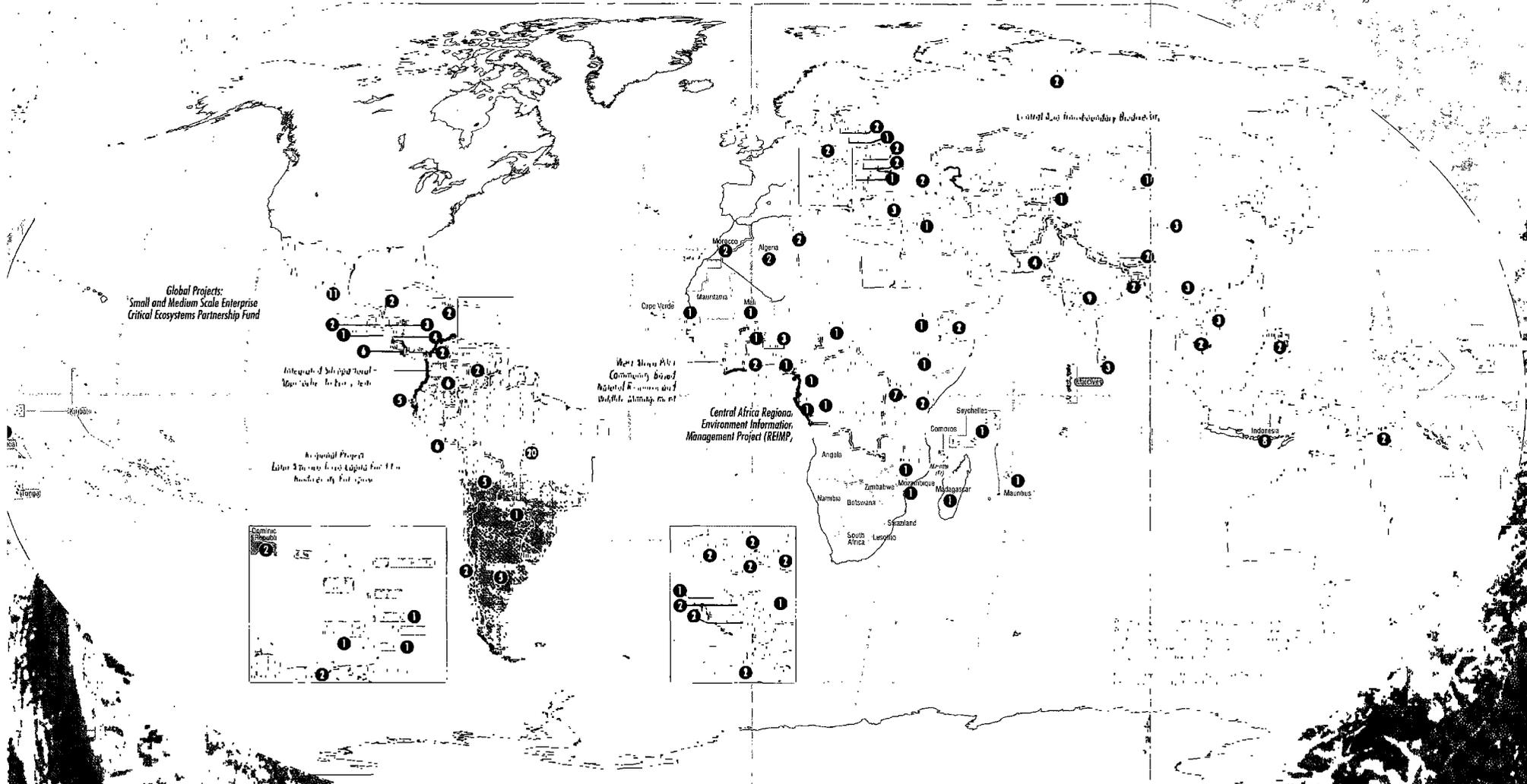
Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Peru	Vilcabamba Conservation and Sustainable Development with Indigenous Communities	2000	GEF MSP	1.14	1.14	0.73	*	*	*		*		*			
Peru	Indigenous and Afro-Peruvian Peoples Development	2000	IBRD LIL	6.70	3.35	2.50	*	*	*					*		*
Peru	Indigenous Management of Protected Areas in the Peruvian Amazon	2001	IBRD	8.14	8.14	5.00			*				*		*	
Peru	Indigenous Management of Protected Areas in the Peruvian Amazon	2001	GEF REG	14.61	14.61	10.00		*			*	*	*			*
Peru	Biodiversity Conservation through Sustainable Management of the Nanay River Basin	2001	GEF MSP	0.95	0.95	0.75	*	*			*	*	*	*		*
Regional - Latin America	Terra Capita Fund for Biodiversity Enterprises	1998	GEF IFC	20.00	20.00	5.00								*	*	*
Saint Vincent and Grenadines	National Biodiversity Strategy and Action Plan	1998	GEF EA	0.35	0.35	0.35	*	*								
St. Lucia	Watershed and Environmental Management	1996	IDA	7.10	2.50	0.93	*	*								
Venezuela	Inparques	1995	IBRD	95.90	95.90	55.00	*	*	*			*				*
Venezuela	Conservation and Sustainable Use of Llanos Ecoregion	1999	GEF MSP	2.43	2.43	0.94	*	*						*		
MIDDLE EAST AND NORTH AFRICA REGION: 9 Projects																
Algeria	Pilot Forestry and Watershed Management	1992	IBRD	37.40	0.40	0.27		*				*				

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
Algeria (a)	El Kala NP and Wetlands Management	1994	GEF REG'	9.56	9.56	7.20			*			*				
Morocco	Lakhdar Watershed Management Pilot	1999	IBRD	5.80	0.66	0.46		*						*		
Morocco (a)	Protected Areas Management	2000	GEF REG	15.70	15.70	10.50	*		*			*	*			*
Syria (a)	Conservation of Biodiversity and Protected Areas Management	1999	GEF MSP	1.43	1.43	0.75	*		*			*				
Tunisia	Second Forestry Development	1993	IBRD	148.10	1.63	0.87	*				*			*		
Tunisia	National Biodiversity Strategy and Action Plan	1997	GEF EA	0.89	0.89	0.89	*	*								
Yemen	Land and Water Conservation	1992	IDA	47.60	0.64	0.44		*								
Yemen	Protected Areas Management	1999	GEF MSP	1.42	1.42	0.74	*	*	*		*		*			
SOUTH ASIA REGION: 20 Projects, 1 Blended GEF-IDA																
Bangladesh	Forest Resources Management	1992	IDA	58.70	27.20	22.10	*	*				*		*		
Bangladesh	Biodiversity Conservation in the Sundarbans Reserved Forest	2001	GEF REG	75.50	75.50	12.20	*	*	*			*	*		*	*
Bhutan	Trust Fund for Environmental Conservation	1992	GEF REG	18.58	18.58	10.00	*	*			*	*			*	
Bhutan	Third Forestry Development	1994	IDA	8.90	1.80	1.09	*		*			*		*		
India	Maharashtra Forestry	1992	IDA	142.00	31.24	27.28		*		*		*	*			
India	West Bengal Forestry	1992	IDA	39.00	6.50	5.67		*				*	*	*		
India	Andhra Pradesh Forestry	1994	IDA	89.10	28.80	25.02		*		*		*	*	*		
India	Forestry Research Education and Extension	1994	IDA	56.40	8.30	6.92		*	*			*				

Forest biodiversity project investments							Biodiversity activities									
Country	Project name	FY	Funder	Project total \$m	Total biodiv \$m	Bank biodiv \$m	1	2	3	4	5	6	7	8	9	10
India	Madhya Pradesh Forestry	1995	IDA	67.30	31.10	26.80	*	*				*	*			*
India	Ecodevelopment	1997	GEF REG	20.00	20.00	20.00		*	*			*				*
India	Ecodevelopment	1997	IDA	47.00	47.00	28.00	*		*			*	*			*
India (a)	Environmental Management Capacity Building	1997	IDA	65.29	5.34	4.09	*	*								
India	Kerala Forestry	1998	IDA	47.00	19.70	16.35	*	*	*			*	*	*		
India	Uttar Pradesh Forestry	1998	IDA	65.01	19.93	16.23	*	*	*			*	*	*		
Pakistan	Environmental Protection and Resource Conservation	1992	IDA	57.20	6.40	3.00		*	*			*		*		
Pakistan (a)	Balochistan Natural Resources Management	1994	IDA	17.80	4.65	3.84	*		*			*		*		*
Pakistan	Punjab Forest Sector Development	1995	IDA	33.75	2.29	1.69		*						*		
Pakistan	Protected Areas Management	2001	GEF REG	10.75	10.75	10.08	*	*	*							*
Sri Lanka	Conservation and Sustainable Use of Medicinal Plants	1998	GEF REG	5.21	5.21	4.60	*	*	*	*		*	*			
Sri Lanka	Land Administration and Management	2001	IDA	6.93	0.25	0.18		*				*	*		*	
Sri Lanka	Protected Area Management and Wildlife Conservation	2001	GEF REG	33.50	33.50	9.00	*	*	*			*	*		*	*
TOTAL				11,307	2,717	1,645										



World Bank Forest Biodiversity Portfolio



Number of World Bank Supported Forest Biodiversity Projects, FY 92-02
 Regional World Bank Supported Forest Biodiversity Projects

The world by region, classified according to World Bank Regional Operational Units / Low- and middle-income economies:

East Asia and the Pacific
 Europe and Central Asia
 Latin America and the Caribbean

Middle East and North Africa
 South Asia
 Sub-Saharan Africa

High income economies:
 OECD
 Other

No data



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