

FINANCING FLOWS AND NEEDS TO IMPLEMENT THE NON-LEGALLY BINDING INSTRUMENT ON ALL TYPES OF FORESTS

PREPARED FOR THE ADVISORY GROUP ON FINANCE
OF THE COLLABORATIVE PARTNERSHIP ON FORESTS



PROFOR

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Prepared for
The Advisory Group on Finance of
The Collaborative Partnership on Forests

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It is emphasised that the views presented in this report are those of the author and do not necessarily reflect the views of the AGF members nor of PROFOR or its donors.



Acronyms and Abbreviations

AFD	Agence Française de Développement	CRS	Credit Reporting System
AfDB	African Development Bank	CSO	Civil Society Organisation
AGF	Advisory Group on Finance	CTF	Clean Technology Fund
AHEG	Ad Hoc Expert Group	DAC	Development Assistance Committee
A/R	Afforestation/Reforestation	DPL	Development Policy Loan
AsDB	Asian Development Bank	EC	European Commission
AUD	Australian Dollar	ECOSOC	Economic and Social Council
BioCF	BioCarbon Fund	EPFI	Equator Principles Financial Institution
BPF	Bali Partnership Fund	ETFRN	European Tropical Forest Resource Network
C&I	Criteria and Indicators	ESMAP	Energy Sector Management Assistance Program
CI	Conservation International	ETFAG	European Tropical Forestry Advisory Group
CAS	Country Assistance Strategy	ETS	Emission Trading Scheme
CBD	Convention on Biological Diversity	EU	European Union
CBBF	Congo Basin Forest Fund	FAO	Food and Agriculture Organization
CBFP	Congo Basin Forest Partnership	FCPF	Forest Carbon Partnership Facility
CDM	Clean Development Mechanism	FDI	Foreign Direct Investment
CEPF	Critical Ecosystem Partnership Fund	FERN	Forests and the European Union Resource Network
CFC	Common Fund for Commodities	FIP	Forest Investment Program
CGIAR	Consultative Group on International Agricultural Research	FLEG	Forest Law Enforcement and Governance
CIF	Climate Investment Fund	FLEGT	Forest Law Enforcement, Governance, and Trade
CIFOR	Center for International Forestry Research	FY	Fiscal Year
CLI	Country-Led Initiative	GDP	Gross Domestic Product
CO ₂	Carbon Dioxide		
COP	Conference of Parties		
CPF	Collaborative Partnership on Forests		

GEF	Global Environment Facility	PES	Payment for Environmental Services
GFM/PA/FFF	Global Financial Mechanism/Portfolio Approach/Forest Financing Framework	PPCR	Pilot Program on Climate Resilience
GFP	Growing Forest Partnerships	PROFOR	Program on Forests
GM	Global Mechanism	PRS	Poverty Reduction Strategy
GOF	Global Objective on Forests	PRSP	Poverty Reduction Strategy Paper
ha	Hectare	RAF	Resource Allocation Framework
IBRD	International Bank for Reconstruction and Development	REDD	Reduced Emissions from Deforestation and Forest Degradation
IDA	International Development Association	REIT	Real Estate Investment Trust
IADB	Inter-American Development Bank	ROCE	Return on Capital Employed
IFAD	International Fund for Agriculture Development	SCF	Strategic Climate Fund
IFC	International Finance Corporation	SFM	Sustainable Forest Management
IFCI	International Forest Carbon Initiative	SME	Small and Medium-Size Enterprise
IIED	International Institute for Environment and Development	TFA	Tropical Forest Account
IMF	International Monetary Fund	TFRK	Traditional Forest-Related Knowledge
IPCC	Intergovernmental Panel on Climate Change	TIMO	Timberland Investment Management Organisation
ITTA	International Tropical Timber Agreement	TNC	The Nature Conservancy
ITTO	International Tropical Timber Organization	UK	United Kingdom
IUFRO	International Union of Forest Research Organizations	UN	United Nations
IUCN	International Union for Conservation of Nature	UNCCD	United Nations Convention to Combat Desertification
LAO PDR	Lao People's Democratic Republic	UNCED	United Nations Conference on Environment and Development
LFCC	Low-Forest-Cover Country	UNCTAD	United Nations Conference on Trade and Development
LULUCF	Land Use, Land-Use Change, and Forestry	UNDP	United Nations Development Programme
MDB	Multilateral Development Bank	UNEP	United Nations Environment Programme
MIGA	Multilateral Investment Guarantee Agency	UNFCCC	United Nations Framework Convention on Climate Change
MoI	Means of Implementation	UNFF	United Nations Forum on Forests
MPMF	Montreal Protocol Multilateral Fund	UNFFS	United Nations Forum on Forests Secretariat
nfp	National Forest Programme	US or USA	United States or United States of America
NGO	Non-Governmental Organisation	USAID	United States Agency for International Development
NLBI	Non-Legally Binding Instrument	WB	World Bank
NTEP	Non-Timber Forest Product	WBG	World Bank Group
ODA	Official Development Assistance	WFP	World Food Programme
OECD	Organisation for Economic Co-operation and Development	WRI	World Resources Institute
		WWF	World Wide Fund for Nature



Executive Summary

The eighth session of the United Nations Forum on Forests (UNFF) will consider 'means of implementation (MoI) for sustainable forest management'. Given the critical importance of the funding issue for the effective implementation of the non-legally binding instrument (NLBI) on all types of forests, the Collaborative Partnership on Forests (CPF), through its Advisory Group on Finance, decided to support substantive preparations for the Ad Hoc Expert Group on Finance and UNFF8 through an analytical mapping of needs and available sources and mechanisms for funding, taking into account the recent developments, including those in the climate change regime.

The study is intended to provide systematic and objective analysis of the funding sources and gaps vis-à-vis the NLBI. The study focuses on external sources because adequate information on domestic financing is not available. The study is based on existing global- and regional-level sources and databases, as well as a survey among bilateral and multi-lateral sources of funding. Two concepts are used in discussing the results: (i) *forestry ODA*, referring to what has been classified by the Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) under support to the forestry sector, and (ii) *forest ODA*, which also includes support to forest conservation.

FINANCING OF NLBI IMPLEMENTATION AND SUSTAINABLE FOREST MANAGEMENT

The NLBI text provides a set of comprehensive actions to be taken by governments to achieve the Global Objectives on Forests (GOFs). NLBI national measures and international cooperation may be considered as necessary elements for achieving the GOFs, but they are not sufficient. The outcome will depend on the action to be taken by all forest stakeholders within the framework provided by the NLBI implementation. Financing is a cross-cutting issue in the NLBI. It is specifically addressed in the GOF4, which calls for reversing the decline in official development assistance (ODA) for sustainable forest management (SFM) and mobilising significantly increased new and additional financial resources for its implementation.

Financing of SFM has proved to be a complex issue because of the dual nature of forest management because it can generate both global and national/local public goods and private profit at the same time (the former from forest-based services such as biodiversity or climate change mitigation and the latter from timber and non-timber forest products). This duality is both a challenge and an opportunity for financing of SFM.

Forest financing sources are classified into public and private, national and international. Domestic public funding may come from general government revenue and revenue from state-owned forests. Private sources consist of forest owners, communities and forest industry, philanthropic funds and donors, as well as non-governmental organisations (NGOs) of various types. In the case of many NGOs, funds are raised from external sources. International public sources include bilateral aid agencies and multilateral financing institutions. Private sources are diversified, consisting of institutional and individual investors, the forest industry, various NGOs, etc. Foreign private financing can be direct or portfolio investment and loans or credits.

DEMAND FOR FOREST ODA IN RECIPIENT COUNTRIES

Country demand for forest ODA is found to be relatively weak: only two-thirds of the surveyed 43 countries mention forests in their poverty reduction strategies (PRSs), and only 28 percent include a coherent national strategy for forests. Forest issues are not yet satisfactorily integrated in PRSs, reflecting weak understanding or low political priority given to forests, or both. Being totally absent in a third of the countries or being treated in either a partial or an inadequate manner in a majority of them suggests that effective demand for ODA to forests appears to be limited. This situation reduces opportunities for donor engagement in forests.

Demand for bilateral ODA is also strongly influenced by suppliers' policies. Supported actions are typically strategic areas identified by the recipient country within the donor's own strategic priorities. In the case of multilateral financing institutions, the situation is somewhat different because they tend to be more demand driven than bilateral donors. However, multilateral institutions are also influencing the demand by means of analytical work, awareness raising among their clients, and development of new services (e.g., financing of global public goods).

ODA's role has proved to be mainly catalytic, and it will critically depend on to what extent national forest programmes (nfps) and associated financing strategies can be incorporated in the national development plans and policies. This has become increasingly important because bilateral donors are

presently channelling a significant part of their assistance through budget support and domestic systems and procedures. Stakeholders in the forest sector in the recipient countries have to meet the challenge of clarifying and raising awareness of the potential of forests in the achievement of the national development goals. Only a few countries have apparently been able to do this.

A number of countries that have developed comprehensive forest financing strategies (e.g., Guyana, Tanzania, and Vietnam) have strongly relied on measures to increase revenue generation from the forest sector as a central element to raise funding for SFM. In national strategies in Latin America, the emphasis is generally given to creation of enabling conditions for private investment and developing new innovative instruments, including payment for environmental services (PES) and specialised funds and credit instruments. Less attention has been paid to smallholders, community forests, and small and medium-size enterprises (SMEs).

EXISTING EXTERNAL SOURCES OF FOREST FINANCING

The current annual bilateral and multilateral flows to forests are estimated at about US\$1.9 billion and the foreign direct investment (FDI) to forest industries at about US\$0.5 billion. Information on private investment by institutional investors, commercial banks, and export credit agencies is not available, and neither is it known how much the NGO and philanthropy sector contributes to forest financing. The ODA to forests includes about US\$700 million for forest conservation. In addition, the conservation NGOs and philanthropy sector focuses on this thematic area.

In 2000–2007, the combined bilateral and multilateral financing flows have increased by almost 50 percent, which has partly been a result of increasing engagement of the multilateral sources as their share of the total external public financing to forests increased from 26 percent to 42 percent during the study period. The multilateral sources accounted for three-quarters of the total absolute increase in the total. However, bilateral ODA has also increased, albeit at a slower rate (15 percent in 2000–2007). (The figures cited should be used with care because the data on external forest financing are incomplete and partly inconsistent.)

Bilateral ODA

Bilateral ODA to forests has mainly come from relatively few sources: 95 percent is provided by nine donors (Germany, Japan, the Netherlands, Switzerland, the United Kingdom, and the United States). Japan's share is overwhelming, accounting for 48 percent of the total. Japan's contribution (including forest conservation) increased by 61 percent in 2000–2007; without it, the total bilateral ODA would have declined by about 9 percent. Five other donors also recorded some increase in forest ODA, but in all other donor countries, the funding declined. The declines are largely explained by reduced allocation to project and programme funding and the increasing role of budgetary support that is not allocated by sector. There is also a general trend to consider forests no more as a self-standing priority, but as part of the climate change and other environmental agenda.

Since 2000, two-thirds of the cumulative forestry ODA has been allocated to Asia, and only 20 percent to Africa and 11 percent to Latin America. Asia's share peaked in 2003, when it reached almost 80 percent of the total. In terms of income level, the least developed countries received 18 percent of the total, and the other low-income group received another 39 percent. The rest (43 percent) was channelled to middle-income countries.

Bilateral ODA is also concentrated among recipient countries. In 2006, India absorbed 22 percent of the total forestry ODA, followed by China (13 percent) and Vietnam (12 percent). Together with Bolivia, Brazil, Cameroon, Colombia, Honduras, Indonesia, and Tanzania, these 10 countries received two-thirds of the total forestry ODA, which is therefore fairly highly concentrated.

Although the traditional forestry ODA in the future might not significantly increase or could even decline in some donor countries, funding through new instruments and various international and regional initiatives is likely to increase, probably significantly. A higher proportion of the ODA may also be channelled through multilateral institutions in line with the recent trend. The increased funding will most likely be linked to the broader climate change and conservation agenda. Funding flows through new instruments and approaches are likely to benefit middle-income countries more than low-income countries. Maintenance of the focus on the least developed countries will therefore be a challenge

because many of them are lacking preconditions for effective aid and other external financial flows.

Multilateral Sources

Multilateral financing to forests is estimated at US\$0.8 billion per year in 2005–2007. The main source is the World Bank (WB) Group, and its share in the total has increased from 51 percent to 73 percent in 2000–2007. More than a half (55 percent) of the World Bank's financing to forests has come from the International Finance Corporation (IFC) in the form of equity and credit to private sector enterprises. The Global Environment Facility's (GEF's) share has been declining from 31 percent to 14 percent during the last six years. Among the regional development banks, the African Development Bank (AfDB) has been the largest source of forest funding (9 percent of the total multilateral flows). The Asian Development Bank (AsDB) and the Inter-American Development Bank (IADB) have been marginal sources during this decade, although their role was more substantial in the 1990s. The International Tropical Timber Organization's (ITTO's) contribution was 5 percent in 2001, but it has dropped to 2 percent.

The other multilateral sources have a volume-wise limited—but strategically important—role for contributing to financing of SFM. The Food and Agriculture Organization's (FAO's) programmes amount to about US\$48 million per year, including the National Forest Programme Facility. Since its inception in 2002, the Facility has supported stakeholders in 42 countries, with grants totalling US\$6 million. The Global Mechanism (GM) of the United Nations Convention to Combat Desertification (UNCCD) attempts to mobilise funding for sustainable land management in which forest interventions can be important.

Private Sector Investments

There is no systematic information available on the domestic or private foreign direct investment in the forestry sector in developing countries. There is, however, a common view that the bulk of forestry investment is from domestic sources by the formal private sector and by communities, landowners, and farmers.

The total foreign-induced investment is substantially higher than the recorded foreign direct invest-

ment (FDI) flows (US\$0.5 billion per year in 2003–2005) because local financing of foreign-owned investment projects is common. The FDI stocks in the wood and paper industries in developing countries have increased rapidly, reaching US\$17.8 billion in 2005. Another recent important trend is FDI made by developing-country investors in other developing countries. A significant increase in foreign private financing in developing countries is foreseen in planted forests and downstream industrial processing. Plantation investments are partly made by timberland investment management organisations (TIMOs) as their risk-averse institutional investors have started to appreciate high expected returns and improved country-level investment climates.

The key issue in private sector financing is to ensure that investments are not made into illegal and unsustainable operations. A growing share of forest industry corporations exporting to environmentally sensitive markets are engaged in corporate social responsibility and have achieved SFM certification or are committed to do it for demonstrating sustainability of their wood supplies. To avoid financing of unsustainable activities and to mitigate the reputational, environmental, and social risks of forest investments, more than 60 private Equator Principles Financial Institutions (EPFIs) have adopted sustainability safeguards in their project finance.

Timberland and other private investors can make a significant contribution to the NLBI national measures in enhancing production of forest goods and services and associated trade. They can also have a positive impact on technology transfer and research, governance, and development of human resources. However, only relatively few countries can offer attractive timber-growing conditions, suitable land availability, and adequate investment climate to enable foreign investment to take place. Appropriate regulation and voluntary measures such as forest certification are needed to mitigate possible negative impacts and to integrate these new actors into the national and local socio-economic framework to maximise mutual benefits.

Other Sources

There are a huge number of other sources of funding on which no consolidated quantitative information is available. Although NGOs may often be well

equipped to raise funds from these sources, forest communities and smallholders have difficulties in accessing most of them. Albeit being perhaps limited in volume, the non-conventional forest-related financing provides a valuable complement to conventional sources, particularly in the focal areas of education, conservation, and research. These sources also address caveats that may not be covered by others, such as innovative and higher-risk projects. Philanthropic sources are already important for financing of forest conservation, and their role could be expanded to address reduction of deforestation and SFM.

EMERGING INSTRUMENTS AND MECHANISMS FOR FOREST FINANCING

Great expectations have been put forward concerning the development of payments for environmental services as a possible complementary source of funding for SFM. However, these expectations have not yet materialised because the experience in developing countries continues to be limited (mainly in Latin America). From the international perspective, the PES schemes of global public goods from forests (e.g., climate change mitigation and biodiversity) have been seen as the most promising way to raise additional financial flows to SFM in developing countries.

Carbon Offset Markets

The main mandatory market for carbon offsets, the Kyoto Protocol's Clean Development Mechanism (CDM), has endorsed only one forest project for the time being. The current forest carbon portfolio under CDM includes a total of 27 projects with a total amount of credits of about 2 million tons of carbon dioxide (CO₂), suggesting substantial potential demand and supply that has not yet been realised. The voluntary market for carbon credits was US\$331 million in 2007, or more than three-fold the 2006 level. One-sixth of this market was generated by reforestation and forest conservation projects. In spite of small volumes, there is a significant forest carbon offset demand that cannot be channelled through the regulated market. In the short run, this unregulated market is likely to play a critical role in developing new ways of implementation for forest carbon trading.

Reduced Emissions from Deforestation and Forest Degradation (REDD)

Avoiding deforestation would be among the lowest cost mitigation options to avoid increasing CO₂ emissions and possibly also increasing carbon sinks. At the same time, other benefits like biodiversity conservation, poverty reduction, and climate change adaptation could also be enhanced. Through carbon revenue, prospects for the economic viability of SFM in developing countries are expected to substantially improve because at least part of the ecosystem services that forests provide could be remunerated.

Reduced emissions from deforestation and forest degradation (REDD) compensation as a win-win instrument is being increasingly supported by practically all stakeholders for a variety of reasons. For tropical country governments, REDD can represent an opening of a new source of financing for national priorities; for donor countries, it can be a low-cost option for carbon offsets; for environmental NGOs, REDD can generate additional resources for biodiversity conservation; for the rural poor, it can mean badly needed income and financial support to community development, as well as a means to improve their forest tenure rights; for the private sector, REDD can be an additional source of funding to make SFM financially viable; for political elites, it's yet another opportunity of income; for multilateral development banks, REDD can open up new ways of doing business in the context of maintenance of global public goods; and for intergovernmental organisations, it offers a new area of intervention in technical assistance and a new funding source.

Meeting such a broad range of varied interests in REDD schemes will be difficult, and several issues need clarification: (i) uncertainty about co-benefits, (ii) risk for violating the rights of indigenous and other local populations, (iii) possible impact on land prices, (iv) equity in distribution of REDD payments, (v) governance arrangements of REDD schemes, (vi) slowness of necessary national-level policy and legal reform processes, (vii) stakeholder participation, (viii) limited access to REDD financing by only forest-rich countries, (ix) possible exclusion of countries that have already addressed deforestation, (x) possible exclusion of drylands and other low-carbon-intensity forest lands, (xi) definitions and methodologies for treatment of land degradation and restoration of deforested areas, (xii) measures to address underlying causes for

deforestation and forest degradation, (xiii) lack of proper understanding on the role of timber harvesting in carbon stock management, (xiv) the level of REDD application (national, sub-national, or project), (xv) use of a market mechanism or a fund mechanism, (xvi) possible flooding of the carbon offset markets with REDD credits, (xvii) transaction costs, etc.

Some of the above issues can be addressed through international regulation, and some through appropriate measures in national REDD strategies. Many concerns are cross-cutting and need to be considered holistically (e.g., in the context of national forest programmes or similar broader strategies). Independently from which approach is applied, there are additional needs for co-financing of complementary activities to ensure that REDD benefits are created in practice, particularly building up country capacity to implement necessary measures to reduce deforestation.

International Climate-Related Forest Initiatives

Several initiatives have been taken to advance the implementation of REDD-related activities:

- The Forest Carbon Partnership Facility (FCPF) of the World Bank will assist developing countries in their efforts to reduce emissions from deforestation and degradation and building capacity for REDD activities. FCPF's two elements are (1) the Readiness Fund to build up specific implementation capacity in participating countries and (2) the Carbon Fund to finance performance-based payments for REDD offsets. FCPF's target capitalisation is at least US\$300 million, of which about US\$155 million has already been pledged.
- Multilateral development banks are in the process of establishing special climate investment funds to assist their members in the implementation of the United Nations Framework Convention on Climate Change (UNFCCC). The Strategic Climate Fund (SCF) will promote international cooperation through new and additional financing for addressing climate change through targeted programmes. SCF will provide incentives to maintain, restore, and enhance carbon-rich natural ecosystems through piloting and scaling up of new development approaches.

SCF has a holistic approach to climate change mitigation and adaptation that is particularly relevant in the forestry sector because of its diverse opportunities to contribute to the climate objectives. As a measure to start implementing SCF within a broad approach to mitigation of forest-based emissions, enhancement of forest carbon sequestration, and adaptive capacity, the World Bank is currently developing a Forest Investment Program (FIP), which could address the key gaps of SFM financing in the existing and emerging instruments such as REDD schemes.

- The Clean Technology Fund (CTF) is targeted at promoting scaled-up deployment, diffusion, and transfer of clean technologies. In regard to the forestry sector, investments in bioenergy and improvement of the forest industry's energy efficiency and management fall under the CTF.
- FAO, the United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP) have launched a joint UN REDD Programme as a collaborative effort to provide coordinated technical assistance in REDD capacity building to developing countries.
- The Collaborative Partnership on Forests (CPF) initiative will elaborate a strategic framework for engaging all the key CPF members for improved cooperation and coordination.
- The International Tropical Timber Organization (ITTO) is planning to develop a thematic programme on tropical forests and climate change.
- Many other international organisations are also developing their own responses to climate change mitigation and adaptation through forest measures (e.g., the Center for International Forestry Research [CIFOR] and the International Union of Forest Research Organizations [IUFRO]).

Climate-Related Regional and Country Initiatives

The progress made in recognition of the role of avoided deforestation and forest degradation under the UNFCCC has given rise to several donor initiatives and some developing-country governments to provide funding for tropical forest conservation, such as the Congo Basin Forest Fund (CBFF) and the Amazon Fund in Brazil. In the developed countries, Australia and Norway (for example) have

launched new financing initiatives targeted at REDD and forest conservation.

There appears to be readiness for action and willingness for financing in climate change mitigation through forest interventions. Many recent decisions by donors will mobilise significant new resources for forest financing, even though their total magnitude is still difficult to estimate. Nevertheless, these initiatives, together with various market-based or fund-based financing schemes, have potential to at least double the current financial flows from the international community to forests in developing countries. However, many of them are targeted at the same forest-rich countries that have also been identified as priorities for REDD schemes.

On the other hand, the multitude of initiatives raises the issue of coordination among various parties and funding mechanisms. There is a risk that funding will be driven by the sources and not by demand. Overlapping mandates between initiatives are likely to emerge. There is a need for harnessing synergies between new and emerging financing mechanisms addressing forest-related global concerns, particularly those related to climate change. Although harmonisation between independent initiatives as an objective may not be realistic and not even appropriate, improved cooperation and coordination are needed, based on comparative advantages and available financial and human resources.

Payments for Forest Environmental Services Other than Carbon

Various regulatory, market-based, and other voluntary payment mechanisms for forest environmental services have been introduced over the last decade. They are already a major source of funding in many developed countries for conservation of watershed conservation and biodiversity, but their greatest potential is in developing countries—particularly in climate change mitigation and adaptation. The actual development of market-based PES mechanisms in developing countries has, however, been slow for several reasons; also the short- and medium-term potential appears to be limited because of constraints related to the policy and regulatory framework, market creation and promotion, engagement of suppliers, lack of technical and business management capacities among forest communities and landowners, etc. Payment schemes may therefore have to rely on domestic public sector funding and

international support, but in the long run, the prospects for market-based solutions appear bright if policy and legal issues can be addressed.

Support is needed to generate (i) realistic understanding of the possibilities of PES schemes; (ii) necessary preconditions for their effective implementation; and (iii) needs for financing of upfront investments in capacity building, information systems, and setting up of appropriate voluntary and regulatory payment mechanisms with intended equity impacts. There are also sovereignty issues to be addressed.

Other Emerging Instruments of Forest Financing

A range of new instruments is being developed to complement the menu of traditional lending and equity investment in the forest sector. These include (i) eco-securitisation and forest-backed bonds, (ii) forest insurance and re-insurance, (iii) application of sustainability safeguards, and (iv) corporate-smallholder/community partnerships. These address some constraints such as upfront financing of long-term forest investments (particularly plantations) and risk management against natural disasters. Eco-securitisation and insurance are important strategic instruments that would greatly facilitate private sector investment in forestry, but with a few exceptions, they are still at the development stage and often need external support.

FINANCING NEEDS AND GAP ANALYSIS

Because of great variation in local conditions, estimating financing needs for implementing sustainable forest management is difficult. The most comprehensive effort to assess financing needs for the forestry sector has probably been carried out by UNFCCC (2007), which concluded with the following indicative estimates for developing countries (Table 1):

TABLE 1
Financing Needs

	US\$billions/year
Opportunity costs for REDD	12.2
Sustainable forest management costs	8.2
Afforestation/reforestation costs	0.1–0.4
Total	21.0

The estimate for afforestation and reforestation (A/R) in Table 1 does not reflect the entire potential of this measure in developing countries because it refers only to lands that are eligible for the CDM (i.e., that were not forest in 1990). The total A/R potential is significantly higher.

Notwithstanding the problems related to estimation of financing needs for REDD and SFM, a comparison with the existing financial flows reveals a vast gap in all areas. In addition, the estimates in Table 1 do not consider investments in capacity building of governments, smallholders, communities, and other stakeholders and other upfront investment costs that would be needed to make forest carbon payments work in practice. Furthermore, climate change adaptation in forests would also require additional financing.

Geographic Gap Analysis

Most developing countries have some ODA flows to forests, but there are 30 countries where no source has been reported. The highest donor presence is found in South and Southeast Asia. Also Central and South America are relatively well covered by donor participation. Africa as a whole and Western and Central Asia have low levels of country presence by external financing sources.

Many low-forest-cover countries do not receive substantial external support in managing and conserving their forests or tree resources. Many small or medium-size countries with still relatively large forests have only limited external support. A number of developing countries with high deforestation rates (above 1 percent per year) have significant donor presence, but there are a number of them where external support is absent or limited (e.g., the Comoros, El Salvador, Mauritania, and Myanmar). Many countries with high or medium forest cover (above 40 percent) have only limited presence of external financing agencies (e.g., Angola, Republic of Congo, Equatorial Guinea, The Gambia, Guinea-Bissau, the Democratic People's Republic of Korea, Timor-Leste, and Trinidad and Tobago). With a few exceptions, small island countries do not receive any support to forests, although their importance in maintenance of biodiversity, watershed protection, and adaptation to climate change are often critical.

Some of these gaps are presumably partly explained by political reasons and partly by weak governance that does not allow effective participa-

tion of external bilateral and multilateral funding agencies in a complex natural resource sector like forestry, often characterised by strong vested interests resisting any pressures for policy and institutional reforms.

On the other hand, there are a number of countries where external funding sources have a particularly strong presence, such as Indonesia, Brazil, Ethiopia, Kenya, and Vietnam.

Private foreign financing through plantation investments has gone to a small number of countries in Latin America and Asia. Foreign investments in natural forest management are concentrated in forest-rich areas in the Congo Basin, the Amazon Basin, and Southeast Asia. Foreign-owned industrial capacity is more broadly invested across countries in Asia and Latin America, but Africa is clearly lagging behind.

Thematic Areas

A considerable share of forest ODA is allocated to forest conservation that is compatible with the principle of supporting enhancement of global public goods. In relative terms, SFM outside protected areas appears to be substantially less supported by external funding. However, these forests also generate important public goods, but their maintenance is not compensated to forest managers. New PES mechanisms, particularly REDD, have a major potential in providing financing for SFM, particularly forest conservation.

Financing of forest restoration is likely to remain a major gap, particularly in arid and semi-arid regions because of their low competitiveness for production of wood and non-timber forest products (NTFPs) and for PES schemes because of low carbon intensity, but their potential contribution to co-benefits (other aspects of SFM) is often substantial.

The upstream investment in policy reforms, capacity building, and other national measures of the NLBI appears grossly insufficient. PES schemes will not remove this constraint because their focus is on payment upon performance of the environmental service.

Private sector financing will be able to take care of most of the investment needs of productive fast-growing plantation development in those countries that have a comparative advantage and adequate investment climate. Trade-related initiatives like forest certification and the EU Forest Law

Enforcement, Governance, and Trade (FLEGT) will assist producers to internalise SFM costs in product prices, but this process will take time as long as low-cost competition continues from illegally and unsustainably produced products and the market share of certified products remains limited.

A whole range of activities are needed to achieve sustained financing of forest management for environmental services and various forest products and services. The long-term scenario should be that these two main income-earning sources could be able to ensure that SFM becomes gradually self-financing. To achieve this goal, new instruments require substantial initial upfront investment to develop and pilot suitable modalities in specific country conditions.

Required investments in areas that are central to SFM implementation, including new instruments like REDD and other PES schemes, include (for example):

- Implementation of measures to shift agribusiness companies and landowners away from clearing of rain forests toward planting on non-forest lands, including improvement of agricultural productivity
- SFM-based production of timber and non-timber forest products
- Establishment and effective implementation of adequate forest ownership/use rights for communities, smallholders, and forest dwellers
- Land-use zoning and planning in forest areas
- Complementary investments in non-forest-sector programmes (agriculture, transportation, mining, energy, etc.) to ensure adequate forest protection
- Building institutional, legal, and technical capacities of governments and private and communal forest stakeholders
- Improving forest governance and forest sector transparency and control
- Restoration of degraded forest ecosystems and plantations
- Improvement and restructuring of forest-based industries
- Rural development, social services, infrastructure, and administration and management skills of forest communities
- Development of innovations and research
- Implementation of market-based and other voluntary mechanisms
- Protection of forests against fires, pests, diseases, and other external threats

TABLE 2
Investment Potential in Developing Countries

Deforestation rate/ relative forest cover	Low-forest-cover countries	High-forest-cover countries
Countries with high deforestation rate	REDD: high/medium potential SFM: low/no potential A/R: high potential Restoration: high potential	REDD: high potential SFM: high potential A/R: high potential Restoration: high potential
Countries with low deforestation rate	REDD: low/no potential SFM: low/no potential A/R: high potential Restoration: medium potential	REDD: medium potential SFM: high potential A/R: low/medium potential Restoration: low potential
Countries with zero deforestation/increasing forest area	REDD: no potential SFM: low potential A/R: medium potential Restoration: low/medium potential	REDD: no potential SFM: high potential A/R: low potential Restoration: low/no potential

Source: Author.

Investment Potential

A qualitative attempt to characterise investment potential in developing countries is given in Table 2. It illustrates where future investment in SFM, REDD, afforestation and reforestation (A/R), and forest restoration could be directed.

GOVERNANCE ASPECTS OF INTERNATIONAL PROGRAMMES AND FINANCING ARRANGEMENTS

There are two basic partnership models: shareholder and stakeholder. Both theory and practice support the view that a shareholder model of corporate governance may promote efficiency at some cost to legitimacy and that a stakeholder model, while increasing legitimacy, may face collective action problems when the number of participants is large and the cost of organising diverse interests to pursue a common goal is high relative to the expected benefit. There appears to be an on-going shift in more recent international forest programmes towards the stakeholder model to improve relevance, ownership, fairness, and accountability, but it is often difficult to balance legitimacy and efficiency.

MAIN FINDINGS

There is a need for substantial new and additional funding from all sources to support SFM and make the NLBI implementation effective on the ground. Although many new promising mechanisms and sources are emerging, so far there is no serious deliberation to define and develop a SFM-specific funding mechanism or instrument.

Although ODA for forests appears to have a modestly increasing trend in the past few years, the gap between the needs and funding is still very wide. ODA to forests has increased only in the case of a few bilateral donors and some multilateral financing institutions. The sustainability of increased ODA is therefore not assured. To make progress to achieve GOF4 in mobilising more resources, concerted efforts are needed from both donor and recipient countries. ODA should play a substantially stronger role in future forest financing. Increased contributions, including to sectoral aid programmes and policy development lending, would be needed in future forest financing to ensure that the financing gap is not expanding further. Because of other pressing priorities in national development, the forest sector in many developing countries will continue to face

challenges in mobilising new public funding for forests. Without explicit linkage with forests in poverty reduction strategies and broader national development plans, there is unlikely to be an increase in explicit demand for, and thereby supply of, ODA to forests. Contribution of forests to poverty reduction and dependency of the poor on forests need further clarification to justify allocation of ODA to forests (including budgetary support).

The Principles of the Paris Declaration on Aid Effectiveness are not yet adequately applied to align and harmonise ODA to forests, resulting in high transaction costs for both donor agencies and recipient countries. Only national leadership to coordinate various financing sources and external initiatives can ensure adequate coordination and effectiveness of external public funding to forests.

National forest programmes provide a useful framework for donor harmonisation and in-country coordination of external financial support to forestry, but only in a small number of countries do they appear to be integrated with broader national development and poverty reduction strategies. There is probably a need to improve implementation of the nfp concept, based on the accumulated experience, to strengthen the quality of analytical work in the elaboration of nfps and their financing strategies. This would clarify where the gaps are to meet the country-level priorities of SFM and implementation of the NLBI national measures for facilitating mobilisation of additional funding.

There are indications that more financing is likely to be available for those countries where there is effective demand for forest financing and where the national legal and policy framework and governance conditions enable investments by both the public and the private sectors. It is indeed the national-level conditions that will largely define how much external financing will be provided to SFM and associated downstream activities.

Success in raising necessary funding for SFM from private sources will largely depend on (i) the markets for forest goods and services and how forest owners and communities and the other actors in the private sector can be made to invest in sustainable operations and (ii) whether the competitiveness of forests as a land use can be ensured against alternative uses. To achieve this on a country level, there should be a conducive policy environment for SFM, and private sector actors (including smallholders and communities) should have access to adequate funding resources.

Without establishing secure land-tenure and forest-use rights, it is unrealistic to assume that the private sector, local communities, and smallholders will invest in SFM. Reform processes are politically sensitive, technically complex, and resource demanding. Implementation tends to be slow, even within an adequate legislation, if the relevant administration cannot be effectively mobilised to implement the will of legislators. This has been frequently underestimated in externally funded programmes and projects to improve land tenure.

Changing the investment climate to provide enabling conditions for both private and public investment as a means to fill part of the SFM financing gap requires addressing both extra-sectoral and forest sector constraints. Addressing the former can rarely be driven by forest sector interests and needs a high-level political commitment. The key sectoral issue in many countries is weak forest governance, which acts as a barrier for both private and public financing. There is a need to assess and monitor national forest sector investment climate to ensure systematic efforts for necessary improvements.

Market-based mechanisms have significant potential to generate financing through payments for forest environmental services, but these mechanisms cannot work effectively without a regulatory framework and the government's promotional role. They also need significant upstream investment because their payments are made upon performance. This constraint should be addressed when PES schemes are developed.

Appropriate integration of forests into the future climate change regime and its financing instruments will be critical for substantial increase in funding volumes to forests. However, for forest-carbon-financing instruments to become prevalent, a number of conceptual, policy, and administrative complexities (e.g., additionality, incrementality, and governance) will need to be resolved first.

Furthermore, although it is encouraging to note that some forest services—in particular, climate change mitigation—have potential to mobilise increased funding for forestry, it is important to ensure that the holistic approach of SFM, including its social, environmental, and economic objectives, are not compromised by a narrow focus on a single commodity or service of forests, such as (for example) carbon sequestration.

The recent experience on biofuels shows that lack of adequate consideration of impacts on society and

the environment plus equity issues in the design of new financing instruments may backfire. This should be avoided in the case of REDD schemes through adequate analytical work, planning, piloting, and awareness raising to create realistic expectations.

In the design of new financing instruments for filling the existing funding gaps for SFM, there is a need to strive for simple practical solutions that can be improved over time with accumulating experience. Piloting is therefore crucial to allow adequate testing of alternative modalities. Perfection in the initial design of new instruments is often the worst enemy of success.

The main thematic bottleneck is financing of mainstream upfront investment on all aspects of SFM, while conservation and capacity building are already covered from a variety of sources, albeit not to a required extent. Access to funding of such mainstreamed upfront investment will be critical in developing countries so that they can make progress towards a higher degree of self-financing of SFM. This self-financing as an objective would be based on revenue generated for forest owners and managers from forest goods and services, including payments for global public goods generated by forests, as appropriate in local conditions.

In view of the existing and emerging financing flows, major geographic gaps appear to be in low-forest-cover countries and least developed countries. These gaps are strategically important because significant opportunities for maintenance and enhancement of global and local public goods from forests remain untapped while the ecosystems of these countries are being degraded. Development of new financing instruments should consider addressing these gaps.

Building up the necessary country capacity would also require additional investment that the current and emerging instruments are not yet sufficiently addressing. For forest actors and other stakeholders as recipients, access to funding sources and transaction costs are crucial. The currently available funding sources have not adequately considered this because their design is usually driven by internal priorities and procedures.

There is an urgent need to improve transparency of external forest (and related) financing from all sources to developing countries. This has been long overdue and has contributed to the slow progress in reaching a consensus on options to mobilise 'new and additional' financial resources for SFM.

Strengthening of International Financing for SFM

There exists a rapidly evolving forest-related financing architecture at the international level that is partly targeted specifically at sustainable forest management and partly at enhancing the contribution of forests to climate change mitigation and conservation of biological diversity. The 'portfolio approach' for forest financing therefore exists because various funding needs of developing countries for SFM are already being financed from a variety of sources. However, the currently available funding sources are inadequate for SFM because of limitations in focus, availability, accessibility, and volume of finance. Further efforts are required to better utilise the existing funding sources and mechanisms and to expand them by creating new financial instruments to fill the existing gaps.

The international-level policy environment related to new funding sources that are targeted at forests, or can support SFM, is constantly evolving. In spite of all existing and emerging financial instruments and sources, with their potentials and limitations, the feasibility of a new 'voluntary global financial mechanism' for SFM (as called for by the Economic and Social Council [ECOSOC] resolution 2007/40) will continue to be a critical political and policy question. Because the currently available funding sources can address only part of the funding needs of SFM and NLBI implementation, the international community should consider whether a specific new SFM/NLBI-targeted instrument or mechanism can be set up to increase financial resources in a systematic and predictable manner.

There are several options for new SFM-targeted funding, including those under development. One example is a broad-based Forest Investment Program along the lines being planned under the Strategic Climate Fund. It could embrace the key multilateral financing institutions and draw on sufficiently large funding flows to be channelled to SFM in developing countries through a variety of instruments, including grants, credits, guarantees, etc.; however, it is noted that it is unlikely that one single funding instrument would be sufficient to fully meet the needs of SFM and NLBI implementation.

Various recent funding initiatives related to forests suggest that the tendency is towards more fragmentation, rather than consolidation. This is a cause of concern for donors, recipient countries,

and their beneficiaries, as well as existing international organisations working in the financing area. There is a risk for overlapping mandates, lack of recognition of competitive advantages, confusion among potential providers of funding to new initiatives, and unhealthy competition for 'good' projects. There is a need to harness synergies between various financing mechanisms and instruments in climate change, biodiversity, land degradation, and sustainable forest management. In view of the independent nature of various financing bodies and sources and the fact that forests are often just one of the financing windows in many cases, it is unrealistic to assume that the various components of the forest financing 'portfolio' could be forged under a single management structure. However, the current cooperative arrangements should be strengthened.

On a country level, enhanced coordination would require integrating instruments such as national forest financing strategies and exchange of

information that could be arranged through appropriate arrangements led by governments. In addition, adequate country capacity should be built up to make full use of the increasingly diversified and complex external and internal funding instruments for forests.

The world's forests are a multi-functional natural resource that, when managed sustainably, can meet the various needs of society in spatial and temporal terms (i.e., local, national, and global, as well as present and future generations). To maintain and enhance the goods and services provided by forests, international-, national-, and local-level action to implement the global commitment to SFM (as expressed in the NLBI) is paramount. It is equally important that appropriate means of implementation, especially financial resources, for sustainable forest management—and thus for the NLBI implementation—are made available. Further clarity on how this can be achieved is urgently needed to make progress on the ground.



CHAPTER ONE

Introduction

1.1 BACKGROUND

The Economic and Social Council (ECOSOC), through its resolution 2007/40, recommended that the General Assembly adopt the non-legally binding instrument (NLBI) on all types of forests; the General Assembly did adopt the NLBI on 17 December 2007 (Resolution 62/198). As a part of the ECOSOC resolution on the NLBI, it has also decided the following:

- To develop and consider, with a view to adopting at the eighth session of the UN Forum on Forests (UNFF), a voluntary global financial mechanism/portfolio approach/forest financing framework (GFM/PA/FFF) for all types of forests, aiming at mobilising significantly increased new and additional resources from all sources, based on existing and emerging innovative approaches, also taking into account assessments and reviews of current financial mechanisms, to support the implementation of sustainable forest management, the achievement of the Global Objectives on Forests (GOFs), and the implementation of the non-legally binding instrument on all types of forests
- That the Forum should, within existing resources, convene before its eighth session an open-ended ad hoc expert group (AHEG) meeting to develop proposals for the development of a voluntary GFM/PA/FFF and invite the

Collaborative Partnership on Forests (CPF) to assist in the development of these proposals

The eighth session of the Forum (20 April through 1 May 2009) will consider 'Means of Implementation (MoI) for sustainable forest management' as a separate agenda item and consider, inter alia, a decision on a voluntary GFM/PA/FFF for sustainable forest management (SFM).

Given the critical importance of the funding issue for the effective implementation of NLBI, in response to the request from the UNFF Secretariat (UNFFS), the CPF members formed an Advisory Group on Finance (AGF), comprising the representatives from the Food and Agriculture Organization (FAO), the Global Environment Facility (GEF) Secretariat, the International Tropical Timber Organization (ITTO), the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat, the UNFFS, and the World Bank (WB) to support the substantive preparations for the AHEG and the eighth session of the UNFF. At its second meeting, held in Bonn on 13 February 2008, the AGF concluded that the NLBI should serve as an umbrella framework under which to consider financial issues. For this, an analytical mapping of needs and available sources and mechanisms for funding should be conducted, based on the provisions of the NLBI, including national measures, international cooperation, and the Global Objectives on Forests (GOFs).

1.2 OBJECTIVES

The study is intended to provide a systematic and objective analysis of the funding sources and gaps vis-à-vis the NLBI, including GOFs, national measures, and international cooperation. The purpose is to provide an overall picture of forest finance in the context of the NLBI, focusing primarily on external sources. In addition to clarifying the contribution of the existing sources, the study attempts to review existing, potential, and evolving sources/mechanisms of funding (in particular, new developments in the climate change regime relating to forest finance).

As a mapping exercise, the study is aimed at identifying thematic areas and geographic regions or country groups that are already covered by existing financing sources and mechanisms, and those where there are gaps.

As ancillary objectives, the study also explores lessons learned and briefly reviews governance arrangements in the existing financial mechanisms to provide background information for consideration of a voluntary GFM/PA/FFF for sustainable forest management.

Based on the conclusions of the study, some suggested options for action are presented. Those actions are targeted at the members of the UNFF and stakeholder groups focusing on how the identified gaps could be covered and how the existing and emerging financial flows and mechanisms could be improved to implement the NLBI in the achievement of the GOFs.

1.3 DATA AND METHODOLOGY

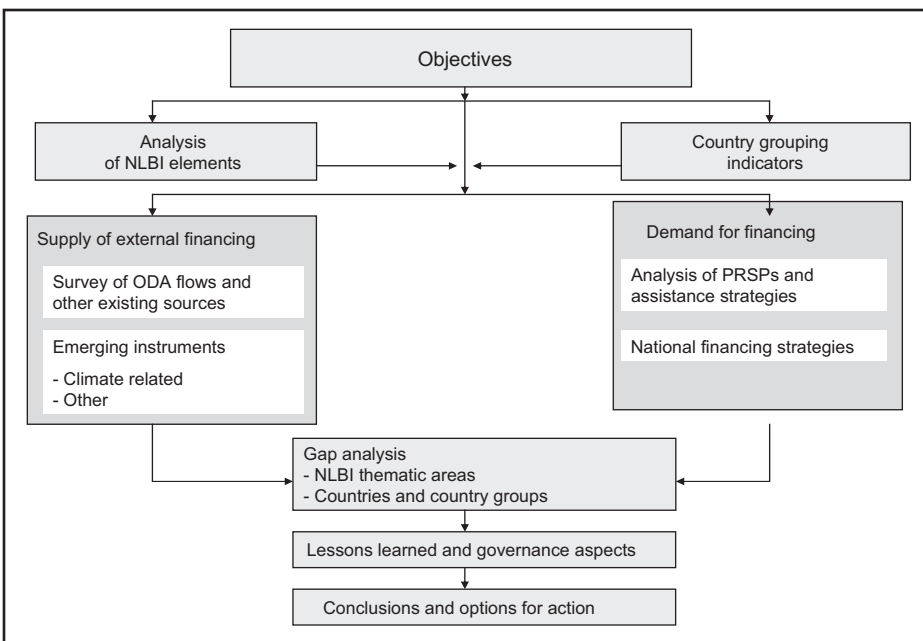
The study approach is summarised in Figure 1.1.

1.3.1 Data

Sources of Data

The study is based on existing global- and regional-level data sources, as well as various donors, international financial institutions, and other databases on funding sources related to, or with potential to, finance SFM activities in countries. FAO has recently updated the *CPF Sourcebook on Funding for*

FIGURE 1.1
Study Approach



Source: Author.

Sustainable Forest Management, which was a useful source of information, as well as the data provided by the Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC). The study also relied on the earlier work carried out on the subject (e.g., El Lakany, Jenkins, and Richards 2007; Savcor Indufor 2006) and the outputs of the various expert meetings and workshops,¹ the European Tropical Forest Resource Network's (ETFRN's) publication on forest financing (Holopainen and Wit 2008), reviews and evaluations of the existing financing mechanisms (WB, GEF, the Critical Ecosystem Partnership Fund [CEPF], etc.), and various other sources (including recent work carried out on financing and reduced emissions from deforestation and forest degradation [REDD] under the UNFCCC and the Convention on Biological Diversity [CBD]) were also drawn on.

There is limited information on the needs of financing for SFM among developing countries. A stock-taking effort was made to collect information on the poverty reduction strategies (PRs), country assistance strategies (CASs), and national forest financing strategies to gauge demand for official development assistance (ODA) for forests.

The available information on domestic forest financing flows is even more limited than that on external sources. There is, however, a general view that domestic sources (including in-kind contributions of forest owners, farmers, and forest communities) provide the bulk of funding for SFM in developing countries (e.g., El Lakany, Jenkins, and Richards 2007; Savcor Indufor 2006; Tomaselli 2006; UNFCCC 2007; etc.). Assessment of domestic sources was not conducted in this study because of time constraints. Further work based on country

case studies could be an appropriate approach to tackle this issue through a separate effort. However, it is recognised that the lack of information on domestic financing sources is a major weakness of this study, and therefore an overall picture of the financing situation of SFM still remains to be established.

Survey on ODA Flows

One of the key pieces of information that is currently missing is the volume and trends in the existing ODA to forests/forestry. In an earlier survey (Joshi 1999; Madhvani 1999), only seven donor countries and a few multilateral organisations were able to provide such data. For this reason, a survey among bilateral agencies and multilateral institutions was carried out to obtain up-to-date information on the ODA flows into forests. This proved to be a highly complex exercise because (i) there are differences in the thematic coverage of national data (e.g., whether forest conservation is included or not); (ii) at least one country included concessional bilateral credits and loans in its data, which were generally excluded; (iii) forest components are often piggybacked into broader programmes and projects, and they are not easily separable; (iv) there are data gaps and also a risk of double-counting of ODA flows going through the multilateral organisations; (v) in many donor databases, forestry is not coded as a specific sector of intervention; and (vi) data have not always been consolidated and need to be compiled from project-level information, which is difficult to interpret.

In view of the very short period programmed for the study, only the following information was requested from about 30 involved agencies: (i) total volume of financial flows to forests; (ii) trends in the volume of forest financing since 2000 and expected future trends; (iii) forest financing by thematic area; and (iv) forest financing by recipient country. The information received was not always consistent and comparable, and there were several important gaps. However, the results may be considered a reasonable basis for mapping an estimated supply of forest ODA.

It is important to note the two concepts used in discussing the results: (i) *forestry ODA*, referring to what has been classified by OECD/DAC under support to the forestry sector, and (ii) *forest ODA*, which includes both forestry ODA and support to forest conservation.

1. The Proceedings of the Oslo (2001) Workshop on Financing Sustainable Forest Management; the UNFF Ad Hoc Expert Group on Finance and Transfer of Environmentally Sound Technologies, 15–19 December 2003, Geneva; the International Expert Meeting on Innovative Financial Mechanisms: Searching for Viable Alternatives to Secure Basis for the Financial Sustainability of Forests; the Country-Led Initiative in support of UNFF5, held in Costa Rica in 2005; the Regional Workshop on Financing Strategies and Mechanisms for Sustainable Use and Conservation of Forests in Latin America, held in Brazil in November 2005; and the Country-Led Initiative on Financing for Sustainable Forest Management, in support of the UNFF, held in Suriname in September 2008.

1.3.2 Methodological Aspects

Regional and Country Grouping

A set of indicators were tentatively identified to be used in grouping countries, sub-regions, or regions. They covered (i) climatic factors (tropical/non-tropical; humid/semi-arid/dry), (ii) characteristics of forest resource (natural/planted, extent of production forest cover, rate of change of forest cover), (iii) social indicators (e.g., population density, poverty, gross domestic product [GDP] per capita, non-state forest ownership), (iv) economic aspects (e.g., total GDP, net exporters/importers in forest products, degree of national indebtedness), and (v) environmental indicators (protected areas, threatened species, forest carbon stock). For each indicator, categories were established for grouping of countries. Time did not allow carrying out a proper cluster analysis; therefore, only six indicators were used: (i) income level, (ii) degree of national indebtedness, (iii) net trade in forest products, (iv) forest share of the total land area, (v) change in forest cover, and (vi) protected area share of the total forest area. These indicators tried to capture key elements of the external support needs for SFM in developing countries. Because it was not possible to elaborate consolidated quantitative data on forest funding flows by recipients, the analysis was based on the presence of bilateral and multilateral funding sources in individual countries.

Gap Analysis

Ideally, the gap analysis for the NLBI implementation should be based on the following elements:

- Assessment on the availability and scope of current funding sources/mechanisms in relation to specific elements of the NLBI and their thematic grouping.
- Review of the existing and evolving sources/mechanisms of funding (in particular, new developments in the climate change regime relating to forest finance and assessment of their potential to contribute to the financing of the NLBI implementation and SFM).
- Geographically aggregated existing and anticipated sources of funding for the various countries according to multiple criteria on forests, as well as economic, social, and environmental factors.

- Identification of the needs of financing for the NLBI implementation and SFM by domestic and external and by public and private sources.
- Overlaying the above information on financing sources, coverage of financial flows by thematic area and country group, as well as in-country specific financing needs for individual measures. This would reveal funding gaps by thematic areas (e.g., NLBI element), by type of activity, and by regional/country group (e.g., Africa, low-forest-cover countries [LFCCs]).

It proved to be impossible to obtain adequate information on the above elements to carry out a comprehensive quantitative assessment. Therefore, the study's gap analysis is qualitative and indicative by nature. The results also draw on some recent gap analyses (e.g., UNFCCC 2007; World Bank 2008a; Blaser and Robledo 2007; GEF/Global Mechanism [GM] [undated], etc.).

FINANCING OF NLBI IMPLEMENTATION AND SUSTAINABLE FOREST MANAGEMENT

1.4 IMPLEMENTATION MEASURES

The NLBI text provides a set of comprehensive actions to be taken by governments to achieve the Global Objectives on Forests (GOFs). Because the text is an outcome of several years of intergovernmental negotiation, reaching a consensus has sometimes influenced the clarity of the text. There is also some element of repetition, which is not necessarily helpful for the clarity of the text.

Financing is a cross-cutting issue in the NLBI. It is specifically addressed in the GOF4, which calls for reversing the decline in ODA for SFM and mobilising significantly increased new and additional financial resources for the implementation of SFM. This implies more ODA to forests than is presently provided. 'New and additional' resources can be interpreted as funds that are not part of the existing total ODA flows (i.e., not reallocation of more funds to forests from the existing ODA flows). This raises the issue of how (for example) carbon financing and other newly emerging instruments receiving funding from the public sector in the donor countries will be classified and whether these instruments may

crowd out existing ODA flows and may not therefore be ‘additional’. (These questions are outside the scope of this study because they need interpretation at a political level.)

The NLBI calls on countries and the international community to undertake a range of finance-related tasks:

- Create enabling environments to encourage investment by multiple stakeholders, including the private sector and local and indigenous communities (NLBI item 6(h)).
- Develop strategies to outline short-, medium-, and long-term financial planning for achieving SFM (6(i)).
- Establish and strengthen partnerships and joint programmes for implementing SFM (6(m)).
- Mobilise and provide significantly increased new and additional financial resources from all sources (7(b)).
- Raise the priority of sustainable forest management in national development plans and other plans, including poverty reduction strategies, to facilitate increased allocation of official development assistance and financial resources from other sources (7(c)).
- Develop and establish positive incentives to reduce the loss of forests; to promote reforestation, afforestation, and rehabilitation; to implement SFM; and to increase the area of protected forests and other areas of SFM (7(d)).
- Support countries to develop and implement economically, socially, and environmentally sound measures that act as incentives for SFM (7(e)).

Analysis of the NLBI text reveals that some national measures contain several distinguishable topics while others are expressed in fairly generic terms. The action targeted at the parties of the NLBI is frequently characterised by expressions like ‘promote’, ‘encourage’, ‘improve’, ‘strengthen’, ‘enhance’, ‘integrate’, and ‘support’. There are fewer elements that are more explicit in terms of action required (e.g., ‘develop’, ‘implement’). There are no specific references for actual financing or investment to be undertaken by the government, and the emphasis is given to creating enabling conditions through adequate policy/legal framework. On one hand, this can be taken as an expression of the ‘new’ role of the government in the forest sector, which

emphasises action and investment to be undertaken by other stakeholders such as the private sector. On the other hand, under the national measures, governments are called upon to develop national financing strategies that should address the needs for funding to achieve SFM and cover all the possible sources of financing.

Examples of possible activities subject to funding were identified under each NLBI national measure (Appendix 1.1). These activities often include analytical work (for policy development and planning); elaboration of plans; organisation of participatory processes; design, testing, and implementation of specific new instruments (C&I, voluntary certification standards, incentive schemes, etc.); education; training; research; etc.

NLBI’s provision for national measures and international cooperation cover to a large extent the same topics in a complementary manner (e.g., policy development, forest governance, capacity building, and financing), but the latter contain several additional elements (e.g., international trade, collaborative partnerships, technology transfer, and information and communication technology).

Many national measures are cutting across the first three GOFs, but a few elements refer to a specific Global Objective. The GOF4 (reversing the ODA flows) is different in character, being specific to a tool and emphasising one source of external financing. It is the only GOF that is defined in terms of an instrument and not as a broader outcome of the NLBI (like the other three GOFs).

It is also noted that the NLBI national measures and international cooperation may be considered as necessary elements for achieving the GOFs, but they are not sufficient. The outcome will depend on the action to be taken by all forest stakeholders within the framework provided by the NLBI implementation.

I.5 SUSTAINABLE FOREST MANAGEMENT AS A FINANCING OBJECT AND CLASSIFICATION OF SOURCES

The dual nature of SFM derives from the fact that both public goods (at global and national/local levels) and private profit can be generated by forest management; the former from forest-based services such as biodiversity or climate mitigation and the latter from timber and non-timber forest products.

This is both a challenge and an opportunity for financing of SFM. Sharing of benefits and costs between the public sector and the owner in a privately owned forest management unit varies, *inter alia*, according to the type of forest resource and the chosen combination of management objectives (del Castillo Cueva 1999). In the traditional situation, the private sector pays the costs of its own benefits, and subsidies can be used to compensate for the public goods that are produced in their lands. These costs are therefore borne by the entire society. This can be changed if non-market benefits are compensated by beneficiaries who can be local, national, or international. In this situation, a payment for environmental services (PES) can be market based or funded through other arrangements.

PES schemes constitute a new market-based source for forest financing that is captured from the revenue of services sold or compensated by national or international sources that may be private or public and domestic or international. PES is based on performance of the forest owners and managers in generating the agreed public goods, and their costs may be additional expenditure or forgone lost revenue. In an ideal situation, two main advantages can be achieved through PES: (i) more equitable sharing of costs of public goods and (ii) more predictable financing flow than through budgetary payments,

which are always subject to change in political priorities. Additional revenue for forest owners and managers should be sufficient to justify investments in the maintenance or enhancement of forest-based public goods. There is no general optimum financing strategy for financing of SFM, which needs always to be worked out in specific country/local situations. There are great expectations for market-based PESs to become a substantial source of financing for SFM because they can internalise costs and benefits of maintenance of global and local public goods provided by forests.

Forest financing sources have been typically classified into public or private and national or international (Table 1.1). Domestic public funding may come from general government revenue and revenue from state-owned forests. Private sources consist of forest owners, communities, the forest industry, philanthropic funds, and donors, as well as non-governmental organisations (NGOs) of various types (environmental, social, religious, etc.). In the case of many NGOs, funds are raised from external sources.

International public sources include bilateral aid agencies and multilateral financing institutions. Private sources are diversified, consisting of institutional and individual investors, the forest industry, and various NGOs and civil society organisations (CSOs).

TABLE 1.1
Overview of Forest Financing Sources

Financing sources		Domestic	International
Public	Governments	<ul style="list-style-type: none"> ■ Investments by national and local governments through subsidies, soft loans, non-monetary incentives, and direct investment 	<ul style="list-style-type: none"> ■ Bilateral ODA (grants, recoverable grants, concessional loans, etc.) ■ Multilateral ODA institutions: IDA, GEF, ITTO, FAO, UNEP, UNDP, GM, and regional development banks (grants, investment lending, investment guarantees) ■ Multilateral targeted programmes: PROFOR, FLEG, CGIAR, BPF, and NFP (grants, co-financing) ■ Multilateral financial institutions: IFC, IBRD, and regional development banks
Private	Forest industry	<ul style="list-style-type: none"> ■ Direct investments (including small and medium-size enterprises [SMEs]) 	<ul style="list-style-type: none"> ■ Foreign direct investment (FDI)
	Financial institutions and institutional investors	<ul style="list-style-type: none"> ■ Short- and long-term credit ■ Portfolio investment ■ Targeted credits ■ Insurance and re-insurance 	<ul style="list-style-type: none"> ■ Short- and long-term credit ■ Portfolio investment ■ Export credits ■ Guarantee instruments ■ Insurance and re-insurance
	Philanthropic	<ul style="list-style-type: none"> ■ Financial support to national NGOs and targeted beneficiary groups 	<ul style="list-style-type: none"> ■ Financial support to international NGOs and targeted beneficiary groups
	Conservation NGOs (self-financing)	<ul style="list-style-type: none"> ■ Financial support to national NGOs and targeted beneficiaries (project funding) 	<ul style="list-style-type: none"> ■ Financial support to international NGOs (programme/project funding) ■ Twinning arrangements
	Other NGOs and CSOs (self-financing)	<ul style="list-style-type: none"> ■ Financial support to national CSOs and targeted beneficiaries (project funding) 	<ul style="list-style-type: none"> ■ Financial support to international CSOs (programme/project funding) ■ Twinning arrangements
Payments for environmental services (PESs)		<ul style="list-style-type: none"> ■ Watershed protection payments ■ Carbon payments ■ Fresh water supply payments ■ Nature-based/eco-tourism ■ Landscape, recreation, and other payments for forest services 	<ul style="list-style-type: none"> ■ Carbon payments (regulatory and voluntary market) ■ Biodiversity ■ Nature-based/eco-tourism ■ Bioprospecting

Sources: Moura Costa et al. (1999); Sander, pers. comm., author's elaboration.



CHAPTER TWO

Demand for Forest ODA in Recipient Countries

It is difficult to gauge the potential demand for ODA to forests because it is influenced by the developing countries' development priorities at macro and sectoral levels and by the available supply. This study tried to explore three avenues to obtain some information on factors influencing ODA demand to forests: (i) inclusion of forests in poverty reduction strategy papers, which the countries prepare for their own strategic purposes and also for the basis of their negotiations on future ODA with donor agencies; (ii) inclusion of forests in donors' CASs and donor aid policies to explore whether there is an element of supply push in the demand; and (iii) analysis of national forest financing strategies, national forest action plans, and similar instruments that provide information on how the recipient countries perceive the role of ODA and external resources in their overall financial planning.

2.1 FORESTS IN POVERTY REDUCTION STRATEGIES

Poverty reduction strategy papers (PRSPs) are a planning instrument established by the World Bank (WB) and the International Monetary Fund (IMF) in 1999 as a requirement for concessional assistance from the WB through the International Development Association (IDA) and from the IMF through the Poverty Reduction and Growth Facility. Many bilateral donors also refer to PRSPs when they carry out

consultations with individual countries on their future commitments. PRSPs are prepared by governments of low-income countries, but many other countries have also prepared such strategies to guide their overall efforts of development and poverty reduction. In designing PRSPs, governments assume a high level of ownership (i.e., they clearly identify their problems and develop priority actions with the objectives of poverty reduction). The focus is on outcomes that benefit the poor, with a comprehensive, long-term perspective. The PSRP design process involves broad participation by stakeholders, including the civil society and the private sector, and it also engages the coordinated participation of bilateral, multilateral, and non-governmental development partners.

A sample of 43 countries was analysed during the recent review of the World Bank Forest Strategy (Contreras-Hermosilla and Simula 2007) to determine how they addressed forest issues (Appendix 2.1). The review scrutinised whether these PRSPs contained (i) a treatment of forest issues in the PRSPs, including a significant analysis of the role of forests; (ii) an analysis of the main challenges encountered in the forest sector; (iii) a design of policy and institutional responses to address these challenges; and (iv) a coherent strategy of policy and institutional reforms.

Of the 43 countries, two-thirds (28) had a treatment of forest issues in their PRSPs, including a significant description of the various linkages between

TABLE 2.1
Forests in PRSP

	Description of linkages between forests and poverty growth	Description of forest sector challenges and opportunities	Response policies and programmes exist	Coherent forest strategy exists
Number of countries	28	24	23	12
Share	65%	56%	53%	28%

Source: Contreras-Hermosilla and Simula (2007).

Note: Table shows total of 43 countries analyzed.

forest resources and their role in supporting the livelihoods of the poor and contributing to the economy and to environmental quality (Table 2.1). However, some of the 15 countries that did not have a discussion of forests in their PRSPs were 'forest' countries having a substantial proportion of their land area under forest cover (e.g., Bhutan, Côte d'Ivoire, Indonesia, and Vietnam). Other countries with no treatment of forest issues in their PRSPs included some with a relatively small forest area, but in which forests were clearly important for livelihoods and the environment. In these cases, an in-depth consideration of forest issues in PRSPs would have been required (e.g., Ethiopia, Kenya, and Nigeria)¹.

In 24 countries (constituting more than half of the PRSPs), there was some discussion of the main challenges facing the sustainable management of forest resources and opportunities for interventions. In 23, there was a discussion of policy and programme responses to address the challenges and opportunities identified, but only 12 PRSPs (less than a quarter) translated these responses into a coherent strategy of policy and institutional reforms to improve forest management within the context of overall poverty reduction strategies.

Forest issues are not yet satisfactorily integrated in PRSPs, reflecting weak understanding of, or low political priority given to, forests (or both). Being totally absent in a third of the countries or treated in either a partial or an inadequate manner in a majority of them suggests that explicit demand for external public financing to forests appears to be limited.

1. In spite of the lack of reference to forests in their PRSPs, Vietnam has a WB-financed forest project, and Kenya is in the process of developing one.

This situation reduces opportunities for the World Bank and other donors in engagement in forests. In addition, countries' efforts to reduce poverty are also constrained by not taking advantage of opportunities that forest programmes can provide. However, because PRSPs are a condition to trigger (for example) WB's support to low-income countries, some governments may see the formulation of their PRSPs as merely meeting a requisite for this support. Furthermore, the countries may sometimes have a vested interest to accommodate the priorities of donors in PRSPs to maximise ODA, rather than express their true needs and commitment to alleviate poverty. There is an endogenous relationship between the supply and demand for ODA. Another factor is that (with the exception of countries with significant timber production) forestry is rarely recognised as a separate sector offering a logical entry point for ODA negotiations.

A cause of concern is that the above results on weak understanding of the role of forests in poverty reduction coincide with those of an earlier review of forest issues in PRSPs in Sub-Saharan Africa². This suggests that not much appears to have changed in this respect during the last several years (Contreras-Hermosilla and Simula 2007).

2.2 DEMAND FOR FOREST FINANCING AND DONOR POLICIES AND ASSISTANCE STRATEGIES

Aid policies of five countries (Australia, France, Germany, the United Kingdom, and the United States) were reviewed to understand how they could

2. Oksanen, Pajari, and Tuomasjukka 2003.

TABLE 2.2
Forests in the World Bank Country Assistance Strategies

	Description of linkages between forests and poverty growth	Description of forest sector challenges and opportunities	Response policies and programmes exist
Number of countries	34	23	17
Share	64%	43%	32%

Source: Contreras-Hermosilla and Simula (2007).

Note: Table shows total of 53 countries analyzed.

eventually match with the demand for ODA in developing countries. It appears that most of the donors have their own country support strategies that define the framework for their interventions in the main recipient countries. References to PRSPs are frequently made, and all the donor policies studied³ emphasised poverty reduction, environmental sustainability/conservation, and biodiversity as overarching objectives. Bilateral donors are also emphasising global public goods, and climate change mitigation and adaptation have more recently become part of the overall assistance objectives⁴. There are, however, different interpretations on how these objectives can be achieved.

Among the countries reviewed, only Germany has a specific aid strategy on forests⁵. Specific references to forests and forestry are also found in a few cases, usually in country assistance strategies with which the donor has a long-established cooperation in the sector. There appears to be a general shift from project interventions to more strategic approaches, including not only strengthening of the policy framework and the governance structures but also development of financing instruments. This represents also a change away from traditional conditionality towards new approaches of governance, including through markets, new actors, and voluntary instruments that are all relevant in the forest sector.

It is apparent that demand for bilateral ODA is strongly influenced by suppliers' policies because areas within the donor's own strategic priorities

tend to get more support. In contrast, the multilateral financing institutions tend to be more demand driven than bilateral donors. However, they also influence the demand by means of analytical work, awareness raising among their clients, and developing new services (e.g., financing of global public goods).

In many cases, individual donors' assistance strategies for their partner countries can indicate demand for ODA. For example, the World Bank's country assistance strategies (CASs) contain comprehensive analyses of the country's development challenges and describe the Bank's overall strategy for support based on country priorities and the Bank's comparative advantage. Thus, ODA for forest interventions is possible only if forests are identified in CASs⁶.

A sample of 53 CASs (Appendix 2.1) has been reviewed to find out whether (i) the CAS made significant reference to forest issues, (ii) there was an action plan for the sector, and (iii) there were forest components in the CAS investment plan and/or priority matrix (Table 2.2).

Two-thirds (34) of the CASs included analysis of the interactions between forest resources and poverty alleviation, environment quality, and sustainable economic development. However, these analyses resulted in only 23 cases having any discussion of possible activities to improve the contribution of the sector to these strategic goals. Only 17 CASs considered specific actions in their investment programme. Thus, less than half of the CASs contemplated forest-specific actions and less than one-third considered these actions important enough to include them as part of the assistance strategy.

3. AFD 2007a, 2007b; AFD 2008; AusAID 2006, 2007; BMZ 2005, 2007; DFID 2006a, 2006b, USAID 2006a, 2006b.

4. USAID 2006a.

5. There are also some other countries with an aid strategy on forests (e.g., Finland).

6. CASs for low-income countries are expected to use PRSPs as a basis, but they are not necessarily expected to cover the same areas of intervention because PRSPs are broader than CASs.

This analysis is limited to the World Bank lending programme, which is a limitation because not all countries are interested in borrowing to forestry, particularly if there is sufficient grant-based funding available from other sources.

2.3 NATIONAL FOREST FINANCING STRATEGIES AS TOOLS TO PROMOTE DEMAND FOR SFM FINANCING

National forest programmes (or similar instruments) are tools for, *inter alia*, defining forest policy, how it will be implemented, and how necessary resources are raised (including financing). The past approach has often been based on a gap analysis in which resource-need estimates were compared with the actual funding flows and the gap was supposed to be filled by ODA. This mechanistic approach is being replaced by emphasis on creation of frame conditions conducive to investment based on the qualitative characterisation of the needs. The role of private investments, market-based instruments, resource ownership and management rights, and policy reform are increasingly recognised as entry points (Salmi 2001).

A national strategy for forest financing consists of an overall vision of all the financial needs and means to promote the sustainable use and conservation of forests in a given country according to its policy and development objectives. The ultimate goal is to create enabling conditions for mobilising internal,

external, and innovative resources for implementing SFM. The strategy should provide guidance to policy makers and forest stakeholders on how to finance, in the short and long terms, planned activities for SFM, taking into consideration the multi-purpose management of forest resources and ecosystems (www.fao.org/forestry/44199/en/).

Examples of countries that have developed comprehensive forest financing strategies are Guyana, Tanzania (Box 2.1), and Vietnam. In all these cases, measures to increase revenue generation from the forest sector constitute a central element to raise funding for SFM. With regard to external financing, both FDI and ODA are typically included, and in the latter case, sector-wide approaches are called for to rationalise aid delivery (Salmi and Graig 2001; Salmi, Nguyen, and Trung 1999; Salmi and Monela 2000). In all the three cases, demand for external financing has materialised in substantial grant and loan projects.

A recent survey of 19 Latin American countries has revealed that the revenue generated from forest management is too low to make SFM a competitive option for landowners because of undervaluation of the multi-functionality of forests. In addition to timber, multiple sources of revenues from other forest goods and services need to be tapped (Savenije and van Dijk 2008). The emphasis in the region is generally given to creation of enabling conditions for private investment and developing new innovative instruments, while ODA's role is generally considered catalytic and complementary.

BOX 2.1

Tanzania National Forest Financing Strategy

Main components of the proposed national forest financing strategy:

1. Expansion of revenue base
2. Improvement of revenue collection
3. Promotion of stakeholder involvement and domestic private sector investments
4. Increasing foreign direct investment
5. Optimising the use of foreign assistance and increasing the ownership: The aim is a sector programme approach (sector-wide programme) for donor assistance in the forest

sector with clearly defined and well-managed basket funding, thereby reducing the multitude of administrative rules and requirements (with special reference to the steps in project cycle management, reporting, monitoring, and evaluation) and a constant inflow of various donor and expert missions demanding a lot of staff time, placing a heavy burden on the Tanzanian forestry staff, particularly the senior management.

Source: Salmi and Monela 2000.

National forest financing strategies have paid less attention to smallholders, community forests, SMEs, management of natural tropical forests and secondary forests, rehabilitation of degraded lands, informal financing mechanisms, and tools to ensure that financing goes to sustainable activities (Savenije and van Dijk 2008). This may also be interpreted as a gap in country demand. It is increasingly understood that the financing needs of smallholders, community forests, and SMEs have to be met. Guatemala is a good example for providing incentives for small-scale forestry and tree planting, which has led to experimenting/exploring broader approaches within a comprehensive financing framework (Balsells 2008).

Country demand for forest ODA will critically depend on to what extent national forest programmes (nfps) and associated forest financing strategies can influence the national development plans and policies and (in particular) poverty reduction strategies (Savenije and van Dijk 2008). Donors are presently channelling a significant part of the assistance through budget support, and domestic

systems and procedures should be used as much as possible for delivering and managing financial resources to the public sector. Experience has shown that general budget support does not transform national political realities, and they cannot be used as an entry point or lever to enforce policy change, but the emphasis should be on the process of change (ODI 2006). Implementation of the Paris Declaration on Aid Effectiveness should lead to reduction in project-based support and to increased use of programme-based modalities to lower transaction costs and strengthen national ownership of results and accountability. However, the progress has generally been slow.

Independently from whether the general budget support can deliver its expected benefits, stakeholders in the forest sector in the recipient countries have to meet the challenge of clarifying the potential of forests in the achievement of the national development goals. As explained in section 3.1 and demonstrated in Appendix 2.1, only a fairly small number of countries have apparently been able to do this.



CHAPTER THREE

Existing External Sources of Forest Financing

3.1 OVERVIEW

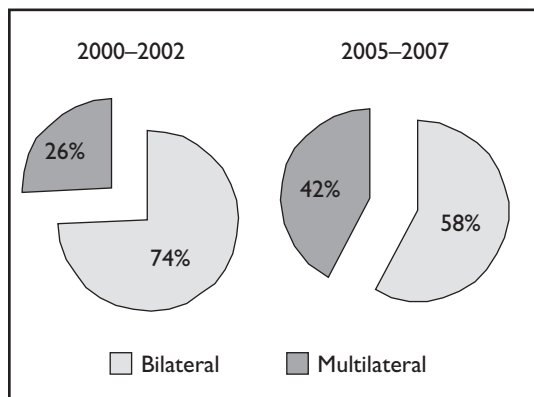
The available information does not allow compilation of a quantitative assessment of all the existing financial flows for forests from external sources. Based on the survey data, complemented by the OECD/DAC statistics¹ and the United Nations Conference on Trade and Development (UNCTAD 2007), a partial picture can be established that may represent the best available summary on external financing to forests in developing countries (Table 3.1). It shows that the current annual bilateral and multilateral flows to forests amount to about US\$1.9 billion and that the foreign direct investment to forest industries totals about 0.5 billion United States dollars (US\$0.5 billion) (Figure 3.1)². Information on private investment by institutional investors, commercial banks, and export credit agencies is not available, and neither is it known how much the NGO and philanthropy sector contributes to forest financing. The partial information shows that the financing volumes from these sources have been increasing.

The level of ODA financing to forests includes about US\$700 million for forest conservation³. In addition, the conservation NGOs and philanthropy focus on this thematic area in their funding.

Based on the survey, in 2000–2007, the bilateral and multilateral financing flows have increased by almost 50 percent, while the increase has also been rapid in FDI to the forest industry. There is a considerable annual variation in the financing flows in the case of many sources that record commitments rather than disbursements because the decisions on large projects tend to create wide variations in the data.

The growth in the external financing flows to forests has partly been a result of increasing engagement of the multilateral sources as their share of the total public financing increased from 26 percent to 42 percent during the study period (Table 3.2).

FIGURE 3.1
Multilateral and Bilateral Financing to Forests in 2000–2007



Source: Appendix 3.1.

1. The OECD/DAC data were used in the absence of replies from donor agencies.

2. Data on FDI in forestry are not available.

3. Estimate based on GEF and the main bilateral donors that included forest conservation in their data.

TABLE 3.1
External Financial Flows to Forests

Source	2000–2002	2005–2007	Change (%)
	US\$ millions at 2006 exchange rates and prices		
Public sector^a			
- Bilateral	959.3	1,103.4	+15.0
- Multilateral	335.0	806.7	+140.8
Total	1,294.3	1,910.1	+47.6
Private sector^b			
- Foreign direct investment	400.0 ^c	516.0 ^d	+29.0
- Other private financing	n.a.	n.a.	Increase
NGO, philanthropic, and others	n.a.	n.a.	Probable increase

a. Appendix 3.1.

b. UNCTAD 2007.

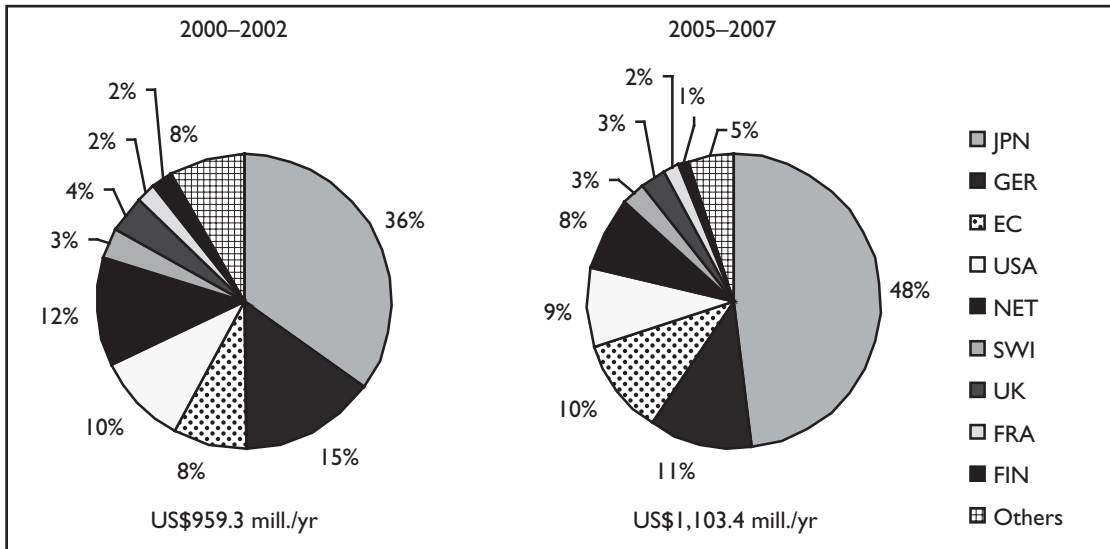
c. 2001–2003 (based on Tomaselli 2006).

TABLE 3.2
Bilateral and Multilateral Financing Flows to Forests by Source in 2000–2007

Sources	2000–2002	Share %	2005–2007	Share %	Change
	US\$ millions per year	2000–2002	US\$ millions per year	2005–2007	%
Bilateral	2006 exchange rates and prices				
European Commission	101.2	7.82	115.7	10.48	14.25
Finland	20.3	2.12	12.7	1.15	-37.42
France	21.3	2.22	19.3	1.75	-9.17
Germany	130.9	13.65	126	11.42	-3.75
Japan	329	34.29	530.5	48.08	61.25
Netherlands	111.7	11.65	88.5	8.02	-20.81
Switzerland	30.2	3.15	30.6	2.78	1.36
United Kingdom	39.2	4.09	28.7	2.6	-26.76
United States	95.9	10	97.6	8.85	1.77
Other	79.5	8.29	53.8	4.87	-32.40
Subtotal	959.3	100	1,103.40	100	15.02
Multilateral	2006 exchange rates and prices				
AfDB	35.8	10.68	72.7	9.02	103.24
AsDB	6.9	2.05	12.4	1.54	79.9
GEF	104.1	31.07	109.4	13.57	5.14
IDB	2.1	0.63	9.1	1.13	331.28
ITTO	16.6	4.96	16.3	2.02	-1.78
IFC	78	23.28	324	40.16	315.38
WB	91.5	27.31	262.7	32.56	187.07
Subtotal	335	100	806.7	100	140.8
Grand total	1,294.30		1,910.10		47.57
Bilateral share %	74.12		57.77		

Source: Appendix 3.1.

FIGURE 3.2
Sources of Bilateral ODA in 2000–2007



Source: Appendix 3.1.

The multilateral sources accounted for three-quarters of the total absolute increase in the aggregate public flows during the study period. However, bilateral ODA has also increased, albeit at a slower rate.

3.2 BILATERAL ODA

3.2.1 Volume and Past Trends

Bilateral ODA to forests mainly comes from relatively few sources (Figure 3.2 and Appendix 3.1). About 95 percent is provided by nine donors: the European Community (EC), Finland, France, Germany, Japan, the Netherlands, Switzerland, the United Kingdom (UK), and the United States (US) (Figure 3.2). Japan's share is overwhelming, accounting for 48 percent of the total in 2005–2007, which is significantly higher than in 2000–2002, when it was 35 percent (Appendix 3.1).

The growth in the bilateral ODA was 15 percent in the 2000–2006 period. Japan's contribution (including forest conservation, as well as concessional loans and credits) increased by 61 percent, and without it, the total bilateral ODA would have

declined by about 9 percent⁴. Six other donors also recorded some increase in forest ODA, but only the EC and US volumes are significant. In all the other donor countries, the forest ODA declined in real terms. The declines are largely explained by the reduced allocation to project and programme funding and the increasing role of budgetary support, the sectoral allocation of which is done by the recipient country. There is also a general trend to consider forests no more as a self-standing priority, but as part of the climate change and other environmental agendas. The poverty link of forests is weakly recognised in country replies of the survey. Another reason to explain reduction in bilateral ODA to forests is the increasing use of multilateral agencies as channels because these have a competitive advantage in those recipient countries where bilateral donors cannot effectively operate because of governance constraints (cf. ETFAG 2007).

3.2.2 Comparison between the OECD/DAC and Survey Data

The survey carried out for this study showed many inconsistencies in the raw data received, and efforts were made with many respondents to correct them. The additional survey was carried out because there has been a perception that the DAC Credit Reporting System (CRS), which is routinely used to

4. Japan is the only country that has included concessional loans and credits in its data.

TABLE 3.3
Comparison of Bilateral ODA to Forests and Biodiversity

Sector	2003/04	2005/06	Change (%)
	US\$ millions at 2006 exchange rates and prices and prices annual average		
Forests			
- Forestry ODA according to DAC ^a	441.8	455.1	3
- Forest ODA according to the survey data ^b	972.7	1,075.50	10.6
Biodiversity total	2,125.60	2,686.80	26.4
- Forest biodiversity ^c	..	312.8 ^d	

a. Source: OECD (2008a).

b. Does not include all contributions to forest conservation; excludes the EC, which was not included in the DAC data.

c. Source: OECD (2008b).

d. Average for the period of 2003–2006.

detect ODA to forestry, gives only a partial view. Indeed, the DAC-reported information (OECD 2008a) does not appear to correspond to the actual funding flows because of weaknesses of DAC members' reporting systems. There are also several gaps in the past data. Reliable estimation of ODA levels based on DAC data is therefore very time consuming, resulting in inaccurate and misleading information.

Furthermore, forest components in projects and programmes that are primarily targeted at rural development, natural resource management, biodiversity, or environmental management are not recorded separately and are therefore another reason for underreporting. In their statistical reporting, DAC members are requested to assign for each aid activity a sector of destination, and within that sector a detailed purpose code that identifies 'the specific area of the recipient's economic or social structure which the transfer is intended to foster'. DAC's thematic areas of 'forestry' include 'forestry policy and administrative management', 'forestry development', 'fuelwood/charcoal', 'forestry education/training', 'forestry research', and 'forestry services' (OECD 2000). This is a narrow interpretation in the context of the NLBI implementation, which represents a holistic and therefore much broader approach to SFM.

In terms of DAC's thematic areas, 'forestry development' received almost two-thirds (63 percent) of the total, followed by 'policy and administrative management' (33 percent), with only token contributions to other activities. It is apparent that the applied DAC breakdown for forestry no longer rep-

resents a feasible way to analyse forest ODA by type of strategic intervention.

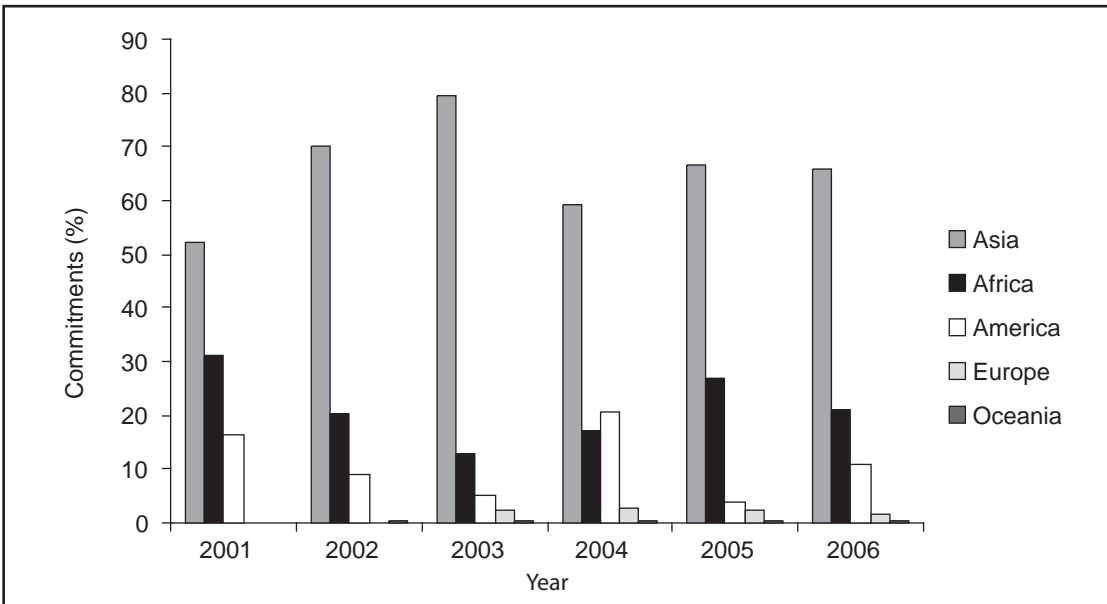
Table 3.3 compares the DAC data for 'forestry' with information on 'forests' collected for this study from donors⁵. It illustrates the possible magnitude of the problems. The survey data suggest that only about half of the total funding volume is recorded by the DAC data. The DAC-reported bilateral donors' contribution to biodiversity amounts to about US\$2.7 billion per year (OECD 2008b). Only about US\$313 million is reported to be allocated to forest biodiversity. The survey data suggest that forest biodiversity ('forest conservation') received about US\$700 million in 2006 from bilateral sources⁶.

The growth rates in ODA may be more easily compared than levels because the DAC information by sector is reported to be consistent over time (e.g., OECD 2000) and the data for this study's survey was also collected in a consistent manner over time. The available information on biodiversity funding allows us to compare only two points of time (annual averages for 2003–2004 and 2005–2006). The information shows that during this two-year period, the DAC recorded that biodiversity funding increased by 26.4 percent, while the increase in the survey data on forest ODA was only 10.6 percent. The DAC recorded that ODA to forestry increased even less. It is therefore apparent that biodiversity funding has

5. Because of lack of OECD/DAC data on biodiversity for other years, Table 3.3 cannot be elaborated for the 2000–2007 period, which is covered by the survey data.

6. The coverage of the DAC data in the total forest biodiversity funding appears to be less than 50 percent.

FIGURE 3.3
Recipients of Forestry ODA by Region in 2001–2006



Source: OECD (2008a).

been growing faster than forest funding over the whole study period.

The comparison shows that any estimations of the forest ODA need to be interpreted with care and with a clear understanding of what is actually covered. There is also a need to consider measures to improve DAC members' reporting practices on forests, including multilateral sources on which several important gaps exist. The breakdown of DAC forestry components should be revised to provide more useful information for analytical purposes than at present.

3.2.3 Recipients of Bilateral ODA

The survey data did not allow elaboration of a comprehensive analysis of the forest ODA breakdown by recipient countries (cf. also section 5.2 for the analysis of the survey data), and therefore the partial DAC data (OECD 2008a) had to be utilised. Since 2000, two-thirds of the cumulative forestry ODA as recorded by DAC has been allocated to Asia, only 20 percent to Africa, and 11 percent to Latin America (Figure 3.3)⁷. Asia's share peaked in 2003, when it reached almost 80 percent of the total. In terms of

income level, the least developed countries received 18 percent of the total, and the other low-income group another 39 percent (Figure 3.4). The rest (43 percent) was channelled to middle-income countries, whose shares show a slightly declining trend in the total.

In 2006, India absorbed 22 percent of the total forestry ODA, followed by China (13 percent) and Vietnam (12 percent). Together with Bolivia, Brazil, Cameroon, Colombia, Honduras, Indonesia, and Tanzania, these 10 countries received two-thirds of the total forestry ODA, which is therefore very concentrated, and significantly more so than in the case of ODA to biodiversity (Table 3.4). However, the three largest ODA recipients are the same countries in both cases: in forestry, they accounted for 48 percent of the total, and in biodiversity, 36 percent.

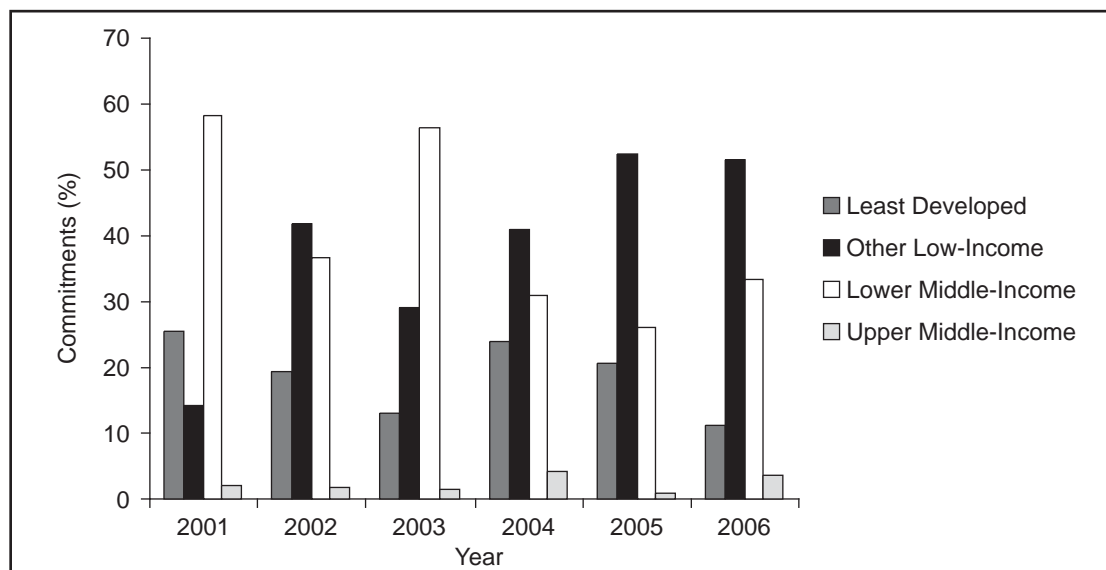
3.2.4 Future Trends

In addition to traditional grant financing for targeted projects and programmes, bilateral donors have introduced new instruments such as sector-wide approaches, programme support, budgetary support, debt-for-nature swaps, etc. The latter are different from the others because they are aimed at increasing resources to targeted forest conservation

7. These figures refer mainly to bilateral ODA.

FIGURE 3.4

Country Recipients of Forestry ODA by Income Group in 2001–2006



Source: OECD (2008a).

TABLE 3.4

Top 10 Recipients of DAC-Recorded ODA to Forestry and Biodiversity

Top 10 recipients	Forestry ^a (US\$ millions)	Share (%)	Biodiversity ^b (US\$ millions)	Share (%)
India	120	22.3	325.8	13.5
China	72	13.4	454.3	18.9
Vietnam	67	12.5	93.4	3.9
Indonesia	25	4.6	70.9	2.9
Cameroon	20	3.7	..	..
Tanzania	14	2.6	..	..
Bolivia	11	2.0	..	..
Brazil	10	1.9	84.5	3.5
Colombia	9	1.7	..	..
Honduras	9	1.7	..	..
Ghana	..	..	62.0	2.6
Morocco	..	..	55.8	2.3
Bangladesh	..	..	48.0	2.0
Kazakhstan	..	..	45.8	1.9
Nicaragua	..	..	35.8	1.5
Others	182	33.8	1,129.9	47.0
Total	538	100.0	2,406.2	100.0

a. 2006; source: OECD (2008a).

b. Annual average 2003–2006 (2006 prices and exchange rates); source: OECD (2008b).

Debt for Nature Swaps of the United States

The US debt-for-nature funding is implemented under the Tropical Forest Conservation Act (TFCA) of 1998, and it involves debt owed to the US government (not commercial debt). Since 2000, 13 debt reduction agreements have been concluded with 12 developing countries in Africa, Asia, and Latin America. These agreements will together generate a total of US\$163 million over the life of the agreements, which range from 10 to 26 years. At present, these bilateral debt reduction programmes together generate about US\$9 million annually for tropical forest conservation projects covering protection of 20 million hectares of biologically rich tropical rain forests in recipient countries. The funding volume has been steadily increasing and will

continue to increase in the future as the newer programmes become operational (e.g., Costa Rica, Guatemala, Paraguay, and Botswana). For partner countries, the debt-for-nature swaps provide long-term, predictable funding for forest conservation that is arranged through a strong public-private partnership in managing TFCA programmes. NGOs such as the Nature Conservancy, Conservation International, and the World Wide Fund for Nature together have contributed more than US\$9.6 million to the TFCA deals in some of the countries in the programme, indicating a leverage effect.

Source: McMurray (2008).

in the recipient country. Box 3.1 demonstrates that they can have a substantial impact on the funding flow in recipient countries.

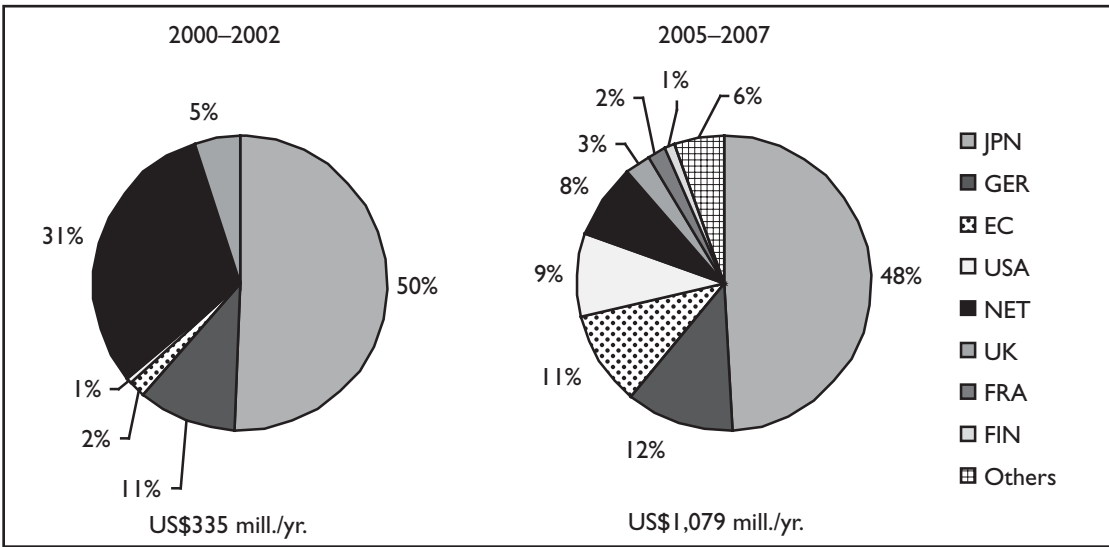
The programmatic approaches in bilateral ODA represent a shift towards more coordinated and more upstream mechanisms of aid delivery. This is in line with the principles of ownership, alignment, harmonisation, and management for results of the Paris Declaration on Aid Effectiveness. The underlying assumption is that aid effectiveness can be improved if fragmentation in delivery can be reduced through joint forms of assistance, resulting in lower transaction costs for both recipients and donors. The programmatic approaches are also expected to contribute to policy coordination and coherence, hence improving allocative and technical efficiency of the use of public resources (ODI 2006). Nfps and national forest financing strategies have potential to introduce programmatic elements in ODA.

Although the traditional forestry ODA in the future might not significantly increase or could even decline in some donor countries, funding through new instruments and various international and regional initiatives (cf. section 5) is likely to increase in the future, probably significantly. A higher proportion of the ODA may also be channelled through multilateral institutions, in line with the trend of the last few years. The increased funding will be linked to the broader climate change, poverty/sustainable

development, and conservation agenda. Several countries such as Australia, Finland, Germany, Japan, the Netherlands, Norway, Sweden, and the United Kingdom have made new commitments or are exploring means to increase forest ODA or to contribute to new forest-related instruments of the climate change initiatives. The latter will probably be decisive for future upward trends in support to forests through bilateral ODA in spite of the fact that some donor countries expect an increase in 'forest' funding. The governance agenda is also contributing to international assistance and will continue to do so, particularly through the EU FLEGT initiative, but funding volumes will be limited compared with what may be mobilised through climate instruments. Many donors are also working to link traditional ODA with other issues (food and energy security, trade, private investment, defence, security, immigration, etc.) within the sustainable development context, which can also contribute to the achievement of the GOFs.

In conclusion, as a whole, the bilateral ODA to forests is likely to increase (directly and indirectly) in the future for a number of reasons, but it may not necessarily be recorded as specific support to forests. Funding flows through new instruments and approaches are likely to benefit middle-income countries that are forest-rich and thereby already among the main recipients of the current ODA

FIGURE 3.5
Multilateral Financing to Forests in 2000–2007



Source: Appendix 3.1.

more than low-income countries (cf. section 5.2). Maintenance of the focus on the least developed countries will be a challenge because many of them are lacking preconditions for effective aid and other external financial flows.

3.3 MULTILATERAL SOURCES

The main source of multilateral financing to forests is the World Bank Group, and its share in the total has increased from 51 percent to 73 percent in 2000–2007 (Figure 3.5). More than a half (55 percent) of the World Bank Group’s financing to forests has come from the International Finance Corporation (IFC) in the form of equity and credits to private sector enterprises. The contributions of the International Development Association (IDA) and the International Bank for Reconstruction and Development (IBRD) have also increased during the study period, albeit less than that of IFC.

GEF’s share has declined from 31 percent to 14 percent in the same period. Among the regional development banks, the African Development Bank (AfDB) has been the largest source of forest funding, and its share has also increased. The Asian Development Bank (AsDB) and the Inter-American Development Bank (IADB) have been marginal sources during this decade, while their role was

more substantial in the 1990s. ITTO’s contribution was 5 percent of the total multilateral financing in 2001, but it has dropped to 2 percent because of constraints to increase contributions from donors. Consolidated information on other multilateral sources is not available, but their volumes are assumed to be marginal.

3.3.1 The World Bank Group⁸

IBRD/IDA

The World Bank Group (WBG) has two banks for lending to the governments of its client countries: the International Bank for Reconstruction and Development (IBRD) for lending and the International Development Association (IDA), which provides grants and loans to least developed countries. The IBRD/IDA forest-specific financing has been declining since the early 1990s, when it was at the level of US\$600 million per year⁹. The Bank’s Forest Strategy, approved in 2002, was targeted at an increased role in forests by addressing poverty

8. This section is partly based on Contreras-Hermosilla and Simula (2007) and internal WB data.

9. The highest volume of the WB lending in forests was achieved in 1994, when it reached US\$888 million.

reduction, integration of forests in sustainable development, and enhancement of global environmental services. The strategy has probably contributed to recent positive developments, and an upward trend in forest financing can be observed since 2001. In fiscal year (FY) 2007¹⁰, the financing volume reached US\$512 million. The growth is partly associated with fairly large new sector investments, and components in some sector adjustment and structural adjustment operations that focus on forests in Africa and Latin America.

The Bank's investments include stand-alone forest projects and projects that contain significant forest components¹¹. The latter can be equally or often more significant in comparison with stand-alone forest projects. Forest components in other projects accounted for 39 percent of the total forest lending in 2000–2005. These projects are mainly related to biodiversity (68 percent of the number of projects), poverty reduction (12 percent), rural development (8 percent), energy (8 percent), and natural resource management (4 percent). Stand-alone forest projects cover a broad range of thematic areas, including sector reforms, community forestry, plantation development, payments for forest environmental services, etc. There is an increased recognition of the role of forest resources for poverty reduction and in the maintenance of global public goods in recent Bank financing (e.g., in India, the Lao People's Democratic Republic [PDR], and Mexico).

The regional distribution of the WB lending shows that the East Asia-Pacific region has been the largest recipient, partly because of large projects in China. Africa's share has been steadily increasing and represented 41 percent of the total IBRD/IDA financing in 2006. In the past, China and India have had large programmes in forestry and may draw on the Bank's future large-scale lending as well. Latin American and Caribbean countries obtain slightly less than a fifth of the WB's forest-related lending¹².

However, some important forest countries (such as Indonesia, Malaysia, and Thailand) have not taken loans from the Bank, which may be interpreted as lack of willingness to borrow to forestry or lack of awareness of sectoral opportunities¹³. In Cambodia and Papua New Guinea, weak forest governance has limited the Bank's role.

In addition to sector loans and investment project lending, development policy loans (DPLs) have become increasingly important. By 2006, the Bank had approved 11 of these loans, with forestry components totalling some US\$94 million¹⁴. These DPLs have been more frequently employed in Africa.

IFC

The International Finance Corporation (IFC), the private sector arm of the World Bank Group, promotes sustainable private sector investment to foster economic development and reduce poverty. IFC finances investments with its own resources and by mobilising capital in the international financial markets. In addition to equity and loan financing, IFC also provides technical assistance to its clients. IFC has invested more than US\$2.8 billion to help finance 132 forestry sector projects. IFC-leveraged investments have averaged in excess of US\$1 billion per year¹⁵; thus, the influence of IFC in forest sector investments is significant.

The size of projects varies between US\$1.5 million and US\$500 million. The pulp and paper industry accounts for 70 percent of the total cumulative investment, while 22 percent was directed at the wood-based panel and engineered wood product industries. Some smaller investments have been made in sawmilling and furniture production. The share of forestry projects (plantations) is increasing, and about half of IFC projects have included an integrated forestry component¹⁶.

10. July 2006 to June 2007.

11. These projects are not classified as 'forest investments', but their forest components are included in the Bank's forest portfolio.

12. The Eastern Europe-Central Asia region had a rapid growth in Bank-financed investment in forests after the disintegration of the Soviet Union in the early 1990s. Since then, many countries have become EU members. However, Bank participation in the large forest sectors of the Russian Federation and Ukraine and in the countries of Central Asia could increase in the future.

13. PRSPs in these countries do not make reference to forests (Appendix 3.1).

14. In FY 2008, the Bank approved a large (US\$500 million) DPL for climate change in Mexico, but its forestry component has not been defined as yet.

15. IFC's annual commitments amount averaged about US\$250 million per year (FYs 2003–2006). Because the leverage factor is reported by IFC to be about 5, the total investment of these projects would be in the range of US\$1 billion to US\$1.5 billion.

16. As an example, there is on-going work to prepare a strategic plan for the pulp and paper industry in Ukraine.

IFC has not invested in projects requiring raw material from natural tropical moist forests procured in the same country¹⁷. This is the result of (i) the shortage of sustainable private operations and (ii) the reputational risk for IFC resulting from the apparently inevitable criticism of some advocacy NGOs that may emerge on any timber production investments based on natural tropical forests. The specific concerns raised include possible takeover of indigenous peoples' lands, displacement of peasant farmers, unduly capital-intensive solutions in using land from the perspective of employment creation, political marginalisation of smallholders in land-use planning, lack of adequate participation, and inadequate impact assessments. The sensitivities related to these legitimate concerns have been exemplified not only by the World Bank's natural forest management investments in Cambodia, the Democratic Republic of Congo, and Papua New Guinea, but also in some projects involving plantation development. It is not probably well understood that proper implementation of the Bank's and IFC's safeguards can effectively eliminate undue adverse impacts related to these concerns (World Bank 2008a).

Geographically, Latin America has attracted most IFC financing (38 percent), followed by Asia (31 percent) and Eastern Europe (23 percent). Africa is clearly lagging behind (8 percent). A total of 49 countries have received IFC financing, but the 10 largest ones account for almost 70 percent of the total¹⁸.

The main drivers for the increase in IFC's portfolio have been strong demand growth for forest products in emerging markets, competitive cost advantage in production of plantation wood in the tropics, and associated relocation of industrial capacity from developed countries (which has benefited several developing countries and countries in transition). An additional factor in forestry investments has been transfer of the resource management responsibility from the state to the private sector in many client countries, which may partly explain limited growth in the World Bank's portfolio of self-standing forest projects.

17. Some IFC investments in timber processing in China have been made in companies that import tropical timber from other countries in the region. In at least one company, IFC has provided technical assistance to build up a certifiable environmental management system to control the origin of raw material and promote forest certification among suppliers.

18. Argentina, Brazil, Chile, China, Colombia, India, Mexico, Pakistan, the Russian Federation, and Turkey.

MIGA

The Multilateral Investment Guarantee Agency (MIGA) promotes foreign direct investment by offering political risk insurance to investors and lenders. It also provides technical assistance to help countries attract and retain this investment. In the forestry sector, MIGA's political risk guarantees have been applied in only two pulp and paper mill projects in the Europe-Central Asia region in the late 1990s¹⁹. The instrument could be applied more extensively because the long time horizon in forestry investments is compatible with the political risk guarantees. Credit financing in forestry investments in many client countries is constrained by lack of nationally available insurance services for forests. MIGA has recently started an SME investment programme that is relevant for forestry enterprises. MIGA has also a substantial potential in providing guarantee services related to forest carbon projects—including afforestation, reforestation, and avoided deforestation—to improve the quality of respective carbon credits.

BioCF

The World Bank has set up the BioCarbon Fund (BioCF) to pilot and demonstrate projects that sequester or conserve carbon in forest and agroecosystems. This public-private initiative aims to deliver cost-effective emission reductions while promoting biodiversity conservation and poverty alleviation. In addition to its central objective of reducing emissions, the BioCF has a strong equity connotation. Community groups, private companies, public agencies, and NGOs can propose projects, implement them, and receive funds in exchange for emission reduction credits. The Fund is consistent with the objectives of UNFCCC, CBD, the United Nations Convention to Combat Desertification (UNCCD), and the GOFs. The Fund has raised a total of US\$91.9 million, and its two tranches are closed to new fund participation.

Based on 150 project proposals, the first BioCF tranche has developed a diversified portfolio of 18 projects worth US\$22 million. By 2007, the Fund had signed 15 emission reduction agreements. Most

19. MIGA has recently considered participation in a pulp mill project in Kalimantan, Indonesia, but because of risks related to the raw materials supply, an agreement was not reached.

of the projects (97 percent) deal with afforestation and reforestation in different forms: commercial plantations (36 percent); community reforestation (26 percent); environmental restoration (21 percent); assisted regeneration (6 percent); and agriculture, silvopastoral systems, and agroforestry (combined 8 percent). Avoided deforestation has also been piloted (3 percent)²⁰.

The BioCF portfolio has the strong participation of Latin America (39 percent) and Africa (34 percent), while Asia is less developed (13 percent)²¹. The relatively large share of Sub-Saharan Africa in the portfolio is partly a result of deliberate promotional effort of the BioCF, but it also demonstrates the potential that the region's poor rural communities could have in the international carbon market through biocarbon trade because they have large areas of degraded land available that are in need of rehabilitation through afforestation/reforestation.

BioCF is a promising piloting instrument that was precedent for the launching of the Forest Carbon Partnership Facility (FCPF) (see section 5.2.4). BioCF's activities have a significant potential for mainstreaming biocarbon in the international carbon offset market, but it is obviously able to meet only a fraction of the potential supply of eligible projects.

World Bank's Forest-Related Global Programmes

The World Bank has presently three global partnership programmes to enhance the implementation of the 2002 Forest Strategy because the Bank alone cannot achieve the targets set²². These programmes are (i) the Forest Law Enforcement and Governance (FLEG), (ii) the Program on Forests (PROFOR), and (iii) the Critical Ecosystem Partnership Fund (CEPF). The first two are implemented by the Bank itself, while the third one is managed by an NGO, Conservation International (see Box 3.2 in section 3.5.2).

FLEG is a partnership based on a broad coalition of the international assistance institutions, governments, non-governmental organisations, institutions of the civil society, and the private sector interested in pooling resources, joining efforts to combat

illegal activities, and improving the quality of governance in the forest sector. Within this coalition, the Bank has a central convening, organising, and coordinating role that it discharges through the FLEG programme, which is targeted at mobilising policy makers and stakeholders for strengthening of forest governance and reduction of illegal activities. FLEG presently focuses on promoting national-level measures through specific action plans.

PROFOR is a multi-donor partnership programme formed to enhance the contribution of forests to poverty reduction, sustainable economic development, and protection of environmental services by carrying out analytical work and thus improving information and creating knowledge on livelihoods, governance, finance, and cross-sectoral cooperation issues. PROFOR has four interrelated themes: (i) a livelihoods approach to poverty reduction, (ii) forest governance, (iii) innovative approaches to financing sustainable forest management, and (iv) cross-sectoral impacts affecting forests. PROFOR's cumulative funding by donors was US\$8.2 million at the end of 2006, and the disbursements were in the order of US\$1.0 million to US\$1.4 million per year in 2004–2006.

In collaboration with FAO and the International Union for Conservation of Nature (IUCN) and with support from the International Institute for Environment and Development (IIED), the World Bank is supporting the implementation of the Growing Forest Partnerships (GFP) initiative²³. The aim is to facilitate bottom-up, multi-stakeholder partnership processes in developing countries to identify national priorities and to better access the increasing forest financing being made available through a wide variety of international means and mechanisms (e.g., carbon finance, private sector investments, ODA, non-conventional funding sources, etc.). The GFP also aims to provide a platform to ensure that marginalised, forest-dependent groups can participate in the formulation of national priorities and be included in the international dialogue on forests. The GFP will work through locally based institutions and will build on existing partnership structures. The World Bank supports this initiative with start-up funding of US\$15 million for the first three years through its Development Grant Facility.

20. Data in this section are based on World Bank (2007a), *Carbon Finance for Sustainable Development 2007*.

21. The balance has gone to Eastern Europe and Central Asia.

22. The global programme WB/WWF Alliance for Forest Conservation and Sustainable Use was started in 1999 and completed in 2007.

23. Earlier called 'Global Forest Partnership' (IIED 2008).

The WB Forest Strategy is compatible with all of the GOFs, and the Bank Group's financing covers a broad range of NLBI elements for national measures. The Bank's scope of intervention is generally fairly comprehensive, and projects are sizeable compared with (for example) those of bilateral donors. IFC's funding is by definition targeted at production and income-generation activities (GOF2 and GOF3). The WB is also actively involved in mobilising new funds for forestry. In spite of this comprehensive approach, there are in practice some caveats, such as management of natural tropical forests, in which the Bank's role has been limited because of strong opposition by some NGOs and local groups. However, joint efforts together with NGOs could demonstrate that sustainably managed and certified production operations in natural tropical forests that are internationally financed can generate important social and environmental benefits and reduce pressure to convert these lands into other uses. This multi-purpose approach to sustainable management of natural forests offers a feasible and socially more acceptable alternative than strict protection in many situations.

The availability of financing (such as that provided by IFC) for sustainably managed operations by responsible private operators, along with the continued greening of the demand for forest products (among both public and private buyers), can make a major contribution to reducing logging by illegal operators. In plantation development, the issues are somewhat different, but joint action would also be highly desirable to mainstream investments that are financially profitable, environmentally sustainable, and socially responsible.

3.3.2 Regional Development Banks

The available information on forestry financing by regional development banks²⁴ suggests that their combined funding volume in 2000–2006 totalled US\$457 million, or about US\$65 million per year. This is only about a quarter of the World Bank Group's financing during the same period. The largest source has been the African Development Bank (AfDB), with a portfolio of US\$352 million,

24. The data were compiled from the banks' project databases available on the Internet because they were not able to provide consolidated statistics on their forestry financing for the ODA survey carried out.

followed by the Asian Development Bank (AsDB) (US\$65.6 million). During the recent years, the Inter-American Development Bank (IADB) has generated only a smaller lending volume in forestry (US\$40 million), in spite of its active work to promote investment by the private sector. Although the annual lending volumes by AsDB and IADB have been rather stable (about US\$9 million and US\$6 million, respectively), AfDB's new commitments have varied extensively in the range of US\$13 million to US\$138 million per year. Only AfDB has recorded a clearly growing trend in its forestry financing, and it appears that the region's demand will continue to increase.

AfDB's portfolio in the forest sector has benefited 21 countries. The projects have covered industrial plantations, conservation, restoration of degraded forests, agroforestry, and institutional capacity. One of the key constraints in AfDB's financing has been long project cycles, averaging 7.4 years (against IADB's 4 years and WB's 3.5 years). AfDB also places emphasis on public-private partnerships, management planning, regulatory frameworks, research, and rural bioenergy (Moussa 2007).

Regional development banks are highly demand driven, and there are significant differences in the public sector's willingness to borrow for forestry. In the case of Latin America, IADB has invested more in disaster relief and other natural resources activities than in forestry for the obvious reason that in many countries, the driving force in forestry investments has shifted to the private sector. In addition, their forestry work has recently focused on creating enabling conditions for private sector investments.

3.3.3 The Global Environment Facility

The Global Environment Facility (GEF) finances 'new and additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits'. GEF is the only multi-convention financing facility in existence and is now the major source of funding specifically supporting the Convention on Biological Diversity (CBD) and the UNFCCC. The GEF also provides support to the implementation of the UN Convention to Combat Desertification (UNCCD).

Since 1991, the scope of GEF's forest-related activities has gradually expanded from the focus on biodiversity to include integrated ecosystem management, combatting land degradation through sus-

TABLE 3.5
GEF Financing Related to SFM from 1997 to 2005

Project type	No. of projects	US\$ millions	%
Forest conservation (primarily protected areas and buffer zones)	109	623.3	53
Sustainable use of forests outside protected areas (primarily in forest production landscapes)	38	143.3	12
SFM in wider production landscapes beyond strictly forests	89	416.4	35
Total	236	1,183.0	100

Source: GEF (2005).

sustainable land management, and (since 2007) sustainable forest management. The accumulated funding to forest-related projects (236) by 2005 was US\$1,183 million (Table 3.5)²⁵. In view of SFM, the GEF support has been categorised under three main groups²⁶: forest conservation (53 percent of the total funding), sustainable uses (12 percent), and mixed land uses (35 percent). The relatively high share of biodiversity in the portfolio (35 percent) is explained by its long-standing role in GEF's portfolio. The earlier projects focused on protected areas as the main tool for biodiversity conservation, but there is a clear trend towards more support to sustainable forest management outside of protected areas (GEF 2005).

GEF's Resource Allocation Framework (RAF) pre-allocates resources in the areas of biodiversity and climate change to countries according to their potential contribution to global environmental benefits and according to their overall performance. RAF is aimed at improving the allocation of resources on a strategic basis and increasing the transparency of operations and results. The downside of this change is that many countries with substantial needs for GEF support may be left with marginal allocations, and countries that do receive major allocations may not give a due priority to forest-related projects. In addition, the RAF for the

Climate Change focal area does not include greenhouse gas (GHG) emissions from deforestation and forest degradation. Allocations would look significantly different had this issue been considered. Hence, forest-relevant countries do not receive appropriate funding through the Climate Change focal area.

In November 2007, the GEF Council approved a Sustainable Forest Management Programme to address this area of intervention in a more comprehensive and coordinated way than in the past. The projects falling under this category will contribute to the implementation of the forest-related commitments and programmes of work of CBD, UNFCCC, and UNCCD. In addition, the Programme will, in particular, support achievement of the Global Biodiversity Target 2010 set by CBD and the Global Objectives of Forests set by UNFF. This means that countries are encouraged to submit projects that cover one or more focal areas (biodiversity, climate change, and land degradation), promoting approaches that are multi-sectoral and ecosystem based and consider forests within the wider production landscape (GEF 2007).

The areas that can be supported by the SFM Programme include (i) sustainable financing of protected area systems at the national level; (ii) strengthening terrestrial protected area networks; (iii) strengthening the policy and regulatory framework for mainstreaming biodiversity; (iv) fostering markets for biodiversity goods and services; (v) supporting SFM in the wider landscapes; (vi) promoting sustainable biomass production; (vii) prevention, control, and management of invasive alien species; and (viii) management of land use, land-use change, and forestry (LULUCF) as a means to pro-

25. Forest management in the wider landscapes beyond forests (i.e., where forest management impacts directly on other land uses and where projects explicitly address this interaction). The percentages have been calculated based on data in GEF (2005).

26. It should be noted that the figures refer to the total value of projects, not components that were specifically allocated for forests.

tect carbon stocks and reduce greenhouse gas emissions (GEF 2007). During the first nine months²⁷ of the SFM Programme implementation, the GEF has committed about US\$152 million and leveraged about US\$482 million in co-financing. GEF investments in SFM during the fourth replenishment period may exceed US\$250 million (corresponding to about US\$60 million annually), or about a quarter of the total GEF SFM-related funding in 1991–2005. Of the current portfolio, the biodiversity focal area accounts for 58 percent, land degradation 24 percent, and climate change 15 percent. The SFM Programme clearly opens up new opportunities for GEF funding (particularly elements v, vi, and viii above), but the emphasis will be on biodiversity conservation and forests as part of sustainable land use for production of global public goods.

Another new GEF instrument is the Tropical Forest Account (TFA), which has been established to encourage greater investment attention in tropical forest management by forest-rich countries. By investing the resources allocated to them under RAF, countries with significant tropical forest resources can leverage additional funds from GEF. Countries in the Congo Basin (consisting of six countries), the Amazon (nine), and New Guinea (two) are already in the process of developing measures to make use of this mechanism. TFA can also be directed at capacity development support for a future financing scheme under the Kyoto Protocol on reduced emissions from degradation and deforestation (REDD), and to implement related SFM strategies. The purpose is to immediately raise an additional US\$50 million to the three regions. A US\$50 million TFA investment would result in excess of US\$100 million becoming available for SFM projects from existing country-specific balances under the GEF4 replenishment (excluding co-financing). More can potentially be mobilised from country allocations if additional TFA resources become available from donors (da Fonseca 2007).

GEF's leverage factor is important, and in the SFM Programme projects funding created 3.1 times more co-financing from bilateral donors and multilateral and regional development banks²⁸. Donors have been interested in the SFM Programme, and for the multilateral development banks' lending

projects, GEF funding is strategically important by softening the cost of credits to client countries.

The downside of GEF grant-blended lending has been that transaction costs tend to be high. On average, it has taken almost five years to process a full-size GEF biodiversity project from its entry into the pipeline to implementation²⁹. Even in the case of medium-size projects, the process has taken up to two years. The long gestation process carries various risks because external factors may change dramatically in the intervening period. The high transaction costs have been present both in the GEF project cycle management and in the preparation of projects by country administrations (GEF 2005). Nonetheless, the significant contribution of the grant component may well more than compensate the higher transaction costs of GEF blended projects for recipient countries (Contreras-Hermosilla and Simula 2007). GEF has recently revamped its project cycle to address these concerns. The time lapse from project idea to final approval has been reduced to a maximum of 22 months, and procedures have been simplified.

In regard to the NLBI implementation, GEF contributes to several thematic areas of national measures, particularly to protected areas, but also to forest goods and services, forest health and vitality, research, education and training, and (to a lesser extent) production (mainly in the context of certification). GEF funding can also cover support to policy, governance, and institutions. Because of its focus on global public goods, GEF can be expected to continue to focus on biodiversity, climate change, and land degradation in its forest-related funding.

3.3.4 ITTO

The International Tropical Timber Agreement (ITTA), 1994 is a legally binding instrument that provides for financing mechanisms for the sustainable management of tropical forests. Its examination from the perspective of lessons learned is therefore particularly relevant. Presently ITTA, 1994 provides for (i) an Administrative Account for assessed contributions by all members to meet the administrative expenses and (ii) a Special Account for project and pre-project financing from voluntary contributions

27. As per September 2008.

28. The leverage factor in SFM-related GEF funding in 1996–2005 was 2.8, calculated based on data in GEF (2005).

29. GEF has recently set a target to reduce the time required for project preparation and processing to 22 months in all projects.

(mainly earmarked). In addition, the Bali Partnership Fund (BPF) has been set up to assist producer members in making the investments necessary to achieve Article 1(d) of ITTA, 1994 ('to enhance the capacity of members to implement a strategy for achieving exports of tropical timber and timber products from sustainably managed sources by the year 2000').

Since 1987, the International Tropical Timber Organization (ITTO) has mobilised US\$314 million to finance some 800 projects and activities, and since 2000, the yearly allocations are in the region of US\$14 million to US\$18 million. Funding has remained at this level during the last 10 years, but in recent years, significant contributions have been made by other donors. Sources of finance to the Special Account include voluntary contributions from consuming members, the Common Fund for Commodities (CFC)³⁰, regional and international financing institutions, and other sources. Possible sources of financing under BPF include contributions from donor members, 50 percent of income earned as a result of activities related to the Special Account, and other private and public sources.

Three main *contributors* of funding have been Japan, Switzerland, and the United States, which have collectively accounted for 90 percent of the cumulative voluntary contributions since 1987. Their share has decreased, but this has been offset by contributions from other donors. The CFC has provided about 2 percent of ITTO's project funding. The average size of ITTO projects is between US\$300,000 to US\$500,000, with a duration of two to three years.

The number of ITTO-recipient member countries has increased and currently includes 33 producer members and 3 developing consumer members. Eight member countries³¹ have received more than 50 percent of the total ITTO funding, while the share of 12 developing member countries has been 1 percent or less of the total for each, suggesting a fairly high degree of concentration³². It might be assumed that the level of project funding would be

related to the relative importance of forest area and international trade. However, because member countries have varying needs depending on their economic status, it might also be expected that project funds should be more generously provided to low-income member countries. However, in general these countries have not been able to attract adequate project funding. There are two issues arising from this: (i) low-income member countries generally have lower capacity to absorb funds effectively, and (ii) they also frequently lack the capacity to prepare and present good proposals. The most disadvantaged member countries have low capacity and higher risk of cross-sectoral failure, implying that projects are relatively less likely to be successfully implemented in these countries. Unless such considerations are properly addressed, these countries are likely to fare badly when their projects are evaluated. Equity in fund allocation is, therefore, a serious concern for many ITTO members (Hardcastle and Umali 2007).

During the negotiation of ITTA, 2006, the debate between producer and consumer countries was focused on (i) producers' desire to ensure more project funding and (ii) the question of how the Organization's policy work should be financed. ITTA, 2006 maintains the principle of meeting the expenses of the Administrative Account by assessed annual contributions equally shared between producer and consumer member countries³³. The Agreement introduces the concept of 'core operational costs'³⁴, which are to be shared in the proportion of 20:80 for producer and consumer member countries, respectively³⁵. This is intended to facilitate increased funding for pre-projects, projects, and activities under the Special Account and BPF that are retained in the Agreement.

Under ITTA, 2006, the Special Account is divided into (i) the Thematic Programmes Sub-Account to facilitate unearmarked financing of pre-projects, projects, and activities consistent with thematic pro-

30. ITTA is classified as a commodity agreement negotiated under UNCTAD.

31. Indonesia (16.2 percent), Malaysia (6.3 percent), Ghana (6.1 percent), the Philippines (5.9 percent), Brazil (5.8 percent), China (5.8 percent), and the Republic of Congo (4.9 percent).

32. The total number of producing member countries is 33.

33. The expenditure level in the Administrative Account has been about US\$5.0 million to US\$5.5 million per year.

34. Such as those related to communication and outreach, expert meetings convened by the Council, and preparation and publication of studies and assessments pursuant to ITTA articles on policy work, statistics, studies and information, and annual report and biennial review.

35. These costs should not exceed one-third of administrative costs, except if the Council decides by consensus to vary this limit for a specific financial biennium.

grammes established and (ii) the Project Sub-Account to facilitate earmarked financing of pre-projects, projects, and activities³⁶. The Thematic Programmes Sub-Account enables donors to make contributions on the basis of thematic programmes, rather than on specific pre-projects, projects, and activities.

The Bali Partnership Fund of the ITTA, 1994 has mobilised some additional funds for the Organization. The BPF requirement of linking with the ITTO Objective 2000 has been somewhat problematic because practically all ITTO work is in one way or another related to the ITTO Objective 2000 and because developing consumer member countries (e.g., China) are excluded.

The ITTA, 2006 financing arrangement has been devised to widen and strengthen the financing base for ITTO operational activities and attract increased, predictable funding. The Thematic Programme Sub-Account will allow donors to allocate funds to thematic programmes of particular interest, rather than micro-managing decisions on individual projects through earmarking. If, as expected, the Thematic Programmes Sub-Account is able to raise significant contributions from more donors than in the past, this will represent a major change. Moreover, the ITTO Council will have more authority to decide on projects from this Sub-Account while allowing ITTO to implement larger projects than in the past. Some large donors have indicated that the Thematic Programmes Sub-Account is necessary for ITTO to have access to new funds from their development agencies.

Diversification of funding sources is critical for the Organization's future. It remains to be seen whether the new arrangement under ITTA, 2006 can mobilise new funding, but at least the Thematic Programmes Sub-Account can be expected to strengthen the overall financing mechanisms of the Organization. The recent ITTO Meeting on Operational Modalities of Future Work of the International Tropical Timber Council³⁷ debated extensively on procedural issues. Because the ITTA, 2006 has not entered into force, decisions on how Thematic Programmes will be managed and which

programmes will be selected³⁸ may be taken until 2009. A conservative expectation is to maintain the past level of ITTO funding of about US\$15 million per year.

Because the ITTA has a holistic approach to SFM, ITTO has contributed directly and indirectly to most thematic areas of the NLBI national measures, and there is a close compatibility between the GOFs and the ITTA objectives. In particular, the following areas are, inter alia, receiving support from ITTO: policy development, forest governance, institutions, production and processing, trade, research, education and training, and protected areas. ITTO's particular competitive advantage is in its focus on industrial and trade development, and thereby poverty reduction.

3.3.5 FAO and the National Forest Programme Facility

FAO is a key provider of technical assistance in forestry. Its regular programme for the Forestry Department and regional offices is about US\$18 million per year, supplemented by US\$5 million for technical cooperation projects. In addition, FAO receives trust fund financing from individual donors for specific programmes and projects that amount to about another US\$30 million in an average year. This includes the contributions to the National Forest Programme (NFP) Facility, which is housed in FAO. A significant part of the trust fund contributions are further transferred to parties in developing countries to implement jointly agreed activities.

As a response to the call by the Intergovernmental Panel on Forests to develop national forest programmes (nfps), more than 100 countries have developed, or are in the process of developing, such programmes or similar strategies. To support these efforts, the NFP Facility was set up as a funding mechanism that supports active stakeholder participation at the country level. The Facility provides grants directly to stakeholders in partner countries to assist them in developing and implementing nfps. Since its inception in 2002, the Facility has supported stakeholders in 42 countries and four sub-regional organisations with grants totalling US\$6 million.

36. Earmarked contributions can be used only for pre-projects, projects, and activities for which they are designated, unless otherwise decided by the donor in consultation with the Executive Director.

37. 9–12 June 2008, Accra.

38. Five themes are indicated in the draft ITTO Action Plan for 2008–2012: Climate Change and SFM, Forest Law Enforcement and Governance, Community Forest Management and Enterprises, Industry Development and Efficiency, and Trade and Market Transparency.

The activities include facilitation of stakeholder participation in national planning processes; nfp preparation; and development of new legal, fiscal, and institutional instruments. The demand for assistance far exceeds the Facility's financial endowment. Direct country support is typically in the range of US\$300,000 per country over a period of three years.

3.3.6 Other Multilateral Sources

The Global Mechanism (GM) of the UNCCD was set up to facilitate financing of the Convention, but it was allocated no resources for funding support to its developing-country members. Drawing on the experiences of the *CPF Sourcebook on Funding for Sustainable Forest Management* and national forest financing strategies, GM has developed tools (i) to facilitate the UNCCD members' access to funding sources (the FIELD database: <http://www.gmfield.info/english/Field/main.htm>) and (ii) to develop country-level integrated financing strategies for sustainable land management (Global Mechanism 2008a). Forest interventions form part of the GM-promoted national strategies for sustainable land management.

Other multilateral sources include the International Fund for Agriculture Development (IFAD), which has financed forestry components in their agriculture and rural development projects. The World Food Programme (WFP) and some other international humanitarian aid programmes have also financed tree planting for restoration of degraded lands and fuelwood production. These inputs have been locally valuable, but there is no information on their total amounts (which are limited compared with other funding sources).

3.4 PRIVATE SECTOR INVESTMENTS

There is no systematic information available on the domestic or foreign direct private investment in the forestry sector in developing countries³⁹. There is, however, a common view that the bulk of the investment in forestry is from domestic sources, while in the processing industries, particularly in pulp and paper, foreign financing is significant in many coun-

39. Different estimates have been presented in various reports, based on varying assumptions. Their comparison did not prove to be informative for the purposes of this study.

tries. Foreign financing takes different forms: direct investments, portfolio investments, and credits. Domestic investments in forest management, plantations, wood industries, and further processing are made by the formal private sector and by communities, landowners, and farmers who may often be operating in the informal sector.

3.4.1 Foreign Direct Investment

The forest industry is undergoing a rapid change in its geographic structure, driven by profitability differentials between regions and countries (Box 3.2). According to UNCTAD (2007), private foreign direct investment (FDI) flows⁴⁰ to forest industries in developing countries have grown at a rapid rate (more than two-fold in 1990–2005), amounting to about US\$0.5 billion per year in 2003–2005 (Table 3.6). In fact, the foreign-induced investment is substantially higher because local financing of investment projects in foreign-owned projects is common in the key countries (Brazil, Chile, China, and Indonesia). As a consequence, the FDI stocks⁴¹ in the wood and paper industries in developing countries have increased, reaching US\$17.8 billion in 2005. A recent important trend is FDI made by developing-country investors in other developing countries, and the outward FDI stocks reached US\$2 billion in 2005. Companies from Brazil, Chile, China, Malaysia, and the Republic of South Africa have been active in direct investment in other developing countries. In general, a substantial increase in FDI financing is foreseen in developing countries in plantations and downstream processing industries.

Based on the available data on pulp mill expansions, it can be estimated that about 18 million to 20 million tons of new pulp capacity will be built in developing countries by 2020⁴². About 25 percent of

40. FDI flows are new investments by foreign enterprises made during a period of time—by either calendar or tax year. Although much inward investment is included in FDI flow statistics, not all of it will be. For example, if an inward investor decided to expand its facilities in a country, but used local finance, this would not appear in FDI flow statistics because it involves no inflow of money to the country.

41. DI stocks measure the level of cumulative FDI stocks of capital investment by foreign enterprises at a single point of time that takes account of both new investment and disinvestment.

42. The announced and known expansions over the next five years alone indicate an expansion of 4.9 million tons in wood-pulp capacity in developing countries and 1.4 million tons in paper and paperboard (FAO 2008b).

Rapidly Changing Profitability Pattern of Forest Industries

According to the PricewaterhouseCoopers's annual Global Forest, Paper, and Packaging Industry Survey, the three top regions in terms of return on capital employed (ROCE), a key measure of financial performance, were Latin America (7.8 percent), Emerging Asia (7.3 percent), and the United States (5.5 percent). Canada's producers earned the lowest average ROCE. 'The global forest, paper and packaging products sector continues to be shaped by shifting business and environmental factors, creating opportunities for some regions and challenges for others.... Mills with the lowest production cost structures are the ones that are best able to manage currency fluctuations and rising costs, allowing them to take advantage of new opportunities and markets'.

The capital reinvestment ratio was highest among Chinese and Latin American producers (3.08 and 2.84, respectively). At the other extreme, Canada had a 2007 reinvestment ratio of 0.4. The reinvestment ratio is capital investment as a percentage of depreciation, measuring the extent that capital investment is replacing aging assets. The forest products companies based in emerging markets, primarily China, Latin America, and the Russian Federation, remain the growth drivers. On the supply side, the competitive advantage continues to shift towards South America, and China remains a major influence on the demand side.

Source: <http://www.pwc.com/extweb/ncpressrelease.nsf/docid/177F0EA303EF1B4E8525748F004E7180> (accessed 5 August 2008).

the world's woodpulp capacity would then be located in these countries. The respective investments could be conservatively estimated at about US\$20 billion to US\$22 billion, or about US\$1.5 billion to US\$1.8 billion per year. Allowing another 20 percent for paper and wood products would mean that the annual total investment in forest industries in developing countries could be in the range of US\$2.0 billion to US\$2.2 billion per year. The FDI component of those investments can be estimated at about 45 percent, or US\$900 million per year⁴³, which suggests almost doubling of the current recorded rate of the FDI inflow in developing countries (cf. Table 3.6).

The current trends in the plantation activity indicate an annual increase of about 1.8 million hectares (ha) per year in developing countries (FAO 2005). This can be expected to accelerate, for a variety of reasons (wood demand, bioenergy, carbon investments, etc.). The respective investment require-

43. On the known planned pulp investments, about half would involve a foreign investor or partner. If the same share is applied for paper and paperboard and 30 percent is assumed for the wood industry, the foreign share of the total forest industry investments would be about 45 percent. However, the actual figure is likely to be lower because part of the projects will be financed locally, although the owner is a foreigner.

ments would therefore be in the range of US\$3 billion per year, of which almost one-third could take place in Brazil⁴⁴. The FDI component in plantations will be mostly related to pulp mill investments and estimated at about US\$300 million per year⁴⁵.

A key issue in private sector financing is to ensure that investments are not made into illegal and unsustainable operations. A growing share of forest industry corporations exporting to environmentally conscious markets in the industrialised countries have achieved SFM certification or are committed to do it to demonstrate sustainability of their wood supplies. Some environmental and social NGOs have, however, expressed concerns about whether plantation-based forest industry can be certified if natural forests have been converted to planted forests.

44. Savcor Indufor (2006) used a global average investment cost of US\$2,000 per hectare, covering the first three years since the establishment phase (excluding the cost of land). There is significant variation in the unit investment costs of industrial plantations among developing countries (e.g., Haltia 2007). In large-scale operations, significantly lower costs are achieved (e.g., in Indonesia and Brazil).

45. The plantation requirement for the projected pulp expansions would be about 3.6 million hectares in 2009–2012, corresponding to about US\$7.2 billion, or US\$600 million per year, of which about half would be related to foreign-owned plantation projects.

TABLE 3.6
Forest-Related Foreign Direct Investment in Developing Countries

	1989–1991	2003–2005
FDI Flows (US\$ millions)		
<i>Inward</i>		
Agriculture, forestry, and fishing ^a	602	1,855
Wood, pulp, and paper products	237	516
<i>Outward</i>		
Agriculture, forestry, and fishing ^a	45	221
Wood, pulp, and paper products	74	30
FDI Stocks (US\$ millions)		
<i>Inward</i>		
Agriculture, forestry, and fishing ^a	4,194	8,707
Wood, pulp, and paper products	4,536	17,793
<i>Outward</i>		
Agriculture, forestry, and fishing ^a	319	1,575
Wood, pulp, and paper products	91	2,062

Source: UNCTAD (2007).

^a There is no separate information on flows and stocks in forestry, which is included in the same group with agriculture, hunting, and fishing.

To avoid financing of unsustainable activities and to mitigate the reputational, environmental, and social risks of forest investments, more than 60 private Equator Principles Financial Institutions (EPFIs)⁴⁶ have adopted sustainability safeguards as a risk management instrument in their project finance for projects less than US\$10 million. These safeguards are derived from IFC's Performance Standards, aimed at ensuring that investments made are compatible with the institution's policy on social and environmental sustainability. Another important source in financing for pulp and paper industry investments in developing countries is export credit agencies, which have not always paid due attention to sustainability in their decisions (e.g., FERN 2007, 2008). In addition, several leading commercial banks have specified additional requirements for forest sector projects, and some have set up special funds for forest and other 'green' investments (El Lakany, Jenkins, and Richards 2007).

In the context of climate change policies, the forest industry has started to reposition itself. New revenue streams can be expected from their forest assets

from environmental services; inherent climate change characteristics of forest products offer a potential competitive advantage in low-carbon economy; and consumers' green preferences are enhancing forest products demand. Implementation of REDD measures are likely to lead to stronger governance because ownership of forest carbon will have to be established before credits are tradeable. Governance improvement would also reduce the role of unfair illegal competition in the marketplace. However, sustainability means higher forest management costs, and threats from climatic damage to forests also require costly adaptation measures. This is expected to lead to re-evaluation of forest asset strategies, capturing benefits from forest-based carbon credits, bioenergy, and ensuring that the entire supply chain meets the criteria for sustainability (cf. World Resources Institute 2008).

3.4.2 Timberland Investment

The emergence of timberland investments has been dramatic in the past two decades or so in industrialised countries. There has been a boom in timberland investments in the United States. The total asset value is currently estimated at US\$30 billion to

46. <http://www.equator-principles.com/index.shtml> (accessed 5 August 2008).

US\$50 billion, which is probably less than a quarter of the potential. Timberland investment management organisations (TIMOs) have become the largest forestland owners or managers in the country. In this situation, it has become harder and harder to find large properties at attractive costs because timberland prices have risen significantly. Forest investment funds also operate in several European countries, although their volume is still limited (but growing).

The trend is driven by three main factors: (i) biological tree growth as a stable and predictable source of revenue, (ii) timber prices, and (iii) land prices. These factors have been coupled with a manageable technical and market risk, supported by flexibility in timing of harvesting and investor exit. In the United States, the federal taxation policy and structural changes in the forest industry were also important drivers for TIMOs. Direct investment in timberlands, which in the past was mainly made by forest industry corporations, has been shifting to indirect investment by institutional investors as a result of three main drivers: (i) securitisation, which has allowed spreading the risk among a large number of investors and improved liquidity of investment; (ii) possibility to use loan financing when real interest rates have been low; and (iii) outsourcing of management of timberlands. Forest industry corporations have often been forced by portfolio investors to divest their timberlands to increase short-term return on capital. Through divestment, they have been disintegrated from their captive wood supply source, which has major strategic implications for their core operations, even though the impacts have been mitigated through long-term supply contracts⁴⁷.

These factors have led to the emergence of TIMOs, which are essentially asset management organisations that sometimes also act as forest managers. Indirect investment in forest lands can take different forms: real estate capital funds, forest estate capital funds, real estate investment trusts (REITs), and timberland investment funds. Most of these funds simply work as investment funds used to purchase assets that can be forest property (land and/or trees). Another option is a partnership fund whereby the fund becomes a shareholder in the existing company owning or running forest business. The

choice of the arrangement is strongly influenced by taxation and varies therefore between countries because of prevailing legislation.

Apart from Australia, New Zealand, and (more recently) some European countries, timberland investments in other countries have so far remained limited to a few projects in Latin America, mainly Brazil. This is expected to change when risk-averse institutional investors have started to appreciate high expected returns and the country-level investment climates have improved. Chile, Colombia, the Russian Federation, and Uruguay are likely to be among the next targets, although the biggest expansion is likely to take place in Brazil in the short and medium terms. This is aided by the on-going trend of Brazilian companies to outsource the management of their forest assets, which makes these easily divestible (Tomaselli, pers. comm.). As one of the lowest-cost producers of pulp in the world, Indonesia can substantially increase planted area, and if its policy and legal framework is improved, new private sector investment in planted forests by TIMOs and industrial investors can be expected.

As with any private investment, the return on investment is the overriding objective for timberland investors. Apart from timber production, all means to improve return are considered (e.g., capitalising on forest environmental services and land development values). Because timberland operators are large, they are well equipped to tap these possibilities for creating new revenue streams for SFM on their lands. TIMOs have contributed to improvement of market conditions in regions where the timber market has been in the hands of large corporations by opening up sales possibilities for smallholders. TIMOs can also foster technology transfer through their improved forest practices, and they can contribute to social development and good governance by self-compliance. Other potential benefits for the country from timberland investments are apparent: rehabilitation of degraded forests and lands, effective sustainable use of natural resources, technology transfer, employment and income creation from forest management, wood production and processing, and infrastructural development.

However, there are also downsides. Although institutional and other private investors are looking for lands with clear land tenure that are not effectively used for other purposes, social issues are likely to arise, particularly in the case of foreign

47. Real estate investment funds or trusts in the United States are not allowed to carry out manufacturing operations and cannot invest in downstream processing.

investors. The timberland investors will have a relatively short-term planning horizon (in the forestry context) and predetermined exit strategies. This is likely to influence their interest in effectively carrying out necessary long-term investments (such as reforestation or rehabilitation of degraded lands by using intensive measures).

Other potential impacts are increased land prices (limiting local farmers' possibilities to buy additional land) and reduced possibilities for local people to use forests. Although smallholders and communities may benefit from opening up new markets for their timber as a result of large-scale investments in nearby areas, the economies of scale in industrial wood production can put smallholders at a disadvantage in the marketplace.

3.4.3 Enhancing the Role of the Private Sector

In addition to physical timber-growing conditions and comparative advantage, the country's investment climate or enabling conditions are the key for future private financing, especially foreign. This is a particular constraint for the forestry sector because investments are generally long-term. Nascimento and Tomaselli (2007) have developed an approach for assessing national investment climates that can also be used to monitor progress. The results of a recent assessment carried out in Latin America (Nascimento 2007) show that there are significant differences between countries. No systematic analysis has been done on the correlation between the investment climate and actual investments, but it is apparent that large-scale forest investments in Brazil, Chile, and Uruguay would not have been made had the enabling conditions not been in place (Nascimento, pers. comm.). On the other hand, Indonesia is an example of a country with large expansion potential where lack of adequate policy and legal framework and weak institutions in the past have been barriers to investment in sustainable plantation forestry and downstream processing industries.

With regard to NLBI, the industry's role is to directly contribute to production, processing, and trade and thereby to the achievement of the first three Global Objectives on Forests. The indirect economic, social, and environmental impact of the industry is broad and cross-cutting, and therefore both enhancement of potential positive effects and

mitigation of possible negative consequences are needed. Timberland and other private investors can make a significant contribution to the NLBI national measures in enhancing production of forest goods and services and associated trade. They can also have a positive impact on technology transfer and research, governance, and development of human resources. The impact is likely to be limited to relatively few countries that can offer attractive timber-growing conditions, suitable land availability, and adequate investment climate to enable foreign investment to take place. Regulation and voluntary measures such as forest certification are needed to mitigate possible negative impacts and to integrate these new actors into the national and local socio-economic framework to maximise mutual benefits.

3.5 NGOs, PHILANTHROPIC FOUNDATIONS, AND OTHER SOURCES

In addition to ODA and private sector financing institutions, there are a huge number of other sources of funding on which no consolidated quantitative information is available. The recent updating of the *CPF Sourcebook on Funding for Sustainable Forest Management*⁴⁸ identified more than 700 sources of different types: international or national, private or public, for-profit or non-profit, general or targeted at certain topics (e.g., research, education) or regions. The thematic areas most frequently covered by these sources include (i) education, training, and public awareness; (ii) conservation; and (iii) research and development. For other topics, relatively few sources (less than 30 worldwide) were identified. Most of the sources are found in North America (46 percent) and Europe (27 percent) (FAO 2008a).

It is noted that there are fragmentation and diversity in funding sources for SFM, which means both (i) opportunities to find a suitable source for almost any kind of forest-related activity and (ii) limitations in terms of finding the right source for a particular purpose. Availability of funding from these diverse sources varies by region because there appear to be fewer opportunities for African and Latin American applicants. Competitive mechanisms for awarding funds are being increasingly

48. www.fao.org/forestry/cpf-sourcebook/en/.

applied. Most of the forest-related financing from various non-conventional sources is made through relatively small amounts, but there are also very large actors among internationally operating NGOs and philanthropic foundations.

From the viewpoint of NLBI implementation, these funding sources provide a valuable complement to conventional sources, particularly in the focal areas of education, conservation, community empowerment, and research. These sources also address various strategic gaps that may not be covered by others, such as support to stakeholder participation in forestry policy and planning processes, investment promotion, production and processing efficiency, traditional forest-related knowledge (TFRK), partnership development, etc. (FAO 2008a). They also provide small grants to projects that build community institutions and their awareness. Although not contributing as significantly to SFM funding in absolute terms, smaller sources providing grants occupy an important niche because they are able to support, in a flexible manner, innovative and higher-risk projects, and they can also be influential in guiding the direction of investments of larger donors (FAO 2008a).

3.5.1 NGOs

The world's seven largest environmental non-governmental organisations (NGOs)⁴⁹ have a total asset value of several billion U.S. dollars, and they generate an annual income of US\$1.5 billion from donations, bilateral aid agencies, and own resources. Many NGOs use a significant part of their financing resources for international work, mostly in developing countries. Biodiversity conservation has been the main target, but more recently some support has also been given to SFM. By far the largest environmental NGO is The Nature Conservancy (TNC), which had in 2007 assets of US\$5.4 billion, of which US\$2.9 billion was invested in conservation lands and conservation easements, which makes the organisation a particularly powerful financier for forest conservation (TNC 2007). Conservation International (CI) is another powerful fund-raiser,

having created CI-managed funds for conservation. In general, the role of conservation NGOs is probably growing as a result of the growing interest of some large US foundations in supporting environment (Box 3.3).

A large number of social NGOs are working in rural development, and many are engaged in supporting sustainable management and conservation of natural resources. Some internationally operating organisations like Oxfam, Caritas, etc., need to be singled out for their support to forest communities and smallholders, in collaboration with small national NGOs and community-based organisations. Although NGOs in developed countries are often well equipped to raise funds, local NGOs, forest communities, and smallholders have difficulties in accessing most funding sources because these tend to have rigorous approaches to application, implementation, monitoring, and evaluation, in spite of the fact that poverty reduction and community development are often identified as priority areas.

With regard to the NLBI implementation, the NGO sources of financing make an important contribution to such areas as forest conservation, poverty reduction and livelihoods, stakeholder participation, partnerships, training, awareness raising, etc. With appropriate outreach and strategic alliances, much support from NGOs can be mobilised for NLBI.

3.5.2 Philanthropy

There is an increasingly important role for philanthropic contributions and the work of the non-profit organisations that they support. The United States is the leading country in this field, with about 68,000 grant-making foundations. Their international giving has increased rapidly, amounting to US\$3.8 billion in 2005, of which about 6 percent (some US\$230 million) was allocated to the environment. Financing to forests would be part of this total, and a substantial share is presumably allocated for biodiversity, indigenous peoples, and forest communities. Among the 15 largest foundations, 8 specify forest-related issues for their grants, such as protected areas, land rights, etc. The future funding flow from these sources will depend on the stock market (the main source of endowment income) and emergence of new sources like Warren Buffet's donation of US\$31 billion to the Gates Foundation, which may allow expansion of its scope of funding beyond

49. The Nature Conservancy, WWF International, the Conservation Fund, Conservation International, the International Union for Conservation of Nature (IUCN), the Natural Resources Defence Council, and the Nature Conservancy of Canada.

Conservation International's Funds

Critical Ecosystem Partnership Fund

CEPF was conceived as a model to demonstrate the effectiveness of mobilising innovative alliances by an internationally credible conservation NGO. CEPF is a joint initiative of Conservation International (CI), the Global Environment Facility (GEF), the government of Japan, the John D. and Catherine T. MacArthur Foundation, and the World Bank. Each partner has committed to a US\$25 million investment over five years. In 2007, the Agence Française de Développement (AFD) from France joined CEPF with a grant of about US\$30 million, and CI co-financed another US\$25 million. The target is to raise another US\$150 million (CEPF 2007).

The objective of CEPF is to provide strategic assistance to NGOs, community groups, and other civil society partners to protect biodiversity hotspots (i.e., the biologically richest—yet most threatened—ecosystems). Each hotspot is characterised by at least 1,500 endemic plants and less than 30 percent of its original natural habitat remaining. Within the hotspots, CEPF investments target action in key biodiversity areas, as well as threats to biodiversity in conservation corridors. CEPF has established active grant-making programmes in 33 countries, and by 2007 it had committed grants of US\$91 million. The annual volume in 2007 was US\$7.9 million (CEPF 2007).

International NGOs had received 59 percent of CEPF's grants through 30 June 2005, including the largest grantee's (CI itself) 35 percent share. CEPF management and some of the donor

partners have expressed concern about the importance of gradually reducing the proportion of grants going to international rather than local and national NGOs. CEPF is managed as a semi-autonomous unit within CI.

Global Conservation Fund

GCF was established in 2007 with a grant from the Gordon and Betty Moore Foundation. It provides financial and strategic assistance to enable local communities, NGOs, and governments to protect their biological riches. GCF is designed to target two critical needs: creating and expanding protected areas and ensuring their effective management. The goal for all GCF projects will be a newly created or expanded protected area supported by a financing strategy and well-capitalised mechanism to cover future management costs. Protected areas supported range from national parks to privately owned lands and community-managed reserves that combine conservation with responsible natural resource use and development.

GCF will help design and support endowments, trusts, and other special mechanisms that create a steady flow of funds for managing important new protected areas in CI's three priority areas: (i) biodiversity hotspots, (ii) high-biodiversity wilderness areas, and (iii) key marine regions.

Sources: <http://web.conservation.org/xp/gcf/where/> (accessed 2 August 2008); Wells et al. (2006).

health to include (for example) rural development and conservation (Renz and Atienza 2006). Another source is wealthy individuals who may directly contribute to field projects or through existing foundations. Mobilising funds from these sources would require professional fund-raising and targeted promotion within long-established contacts, rather than through ad hoc applications.

With regard to NLBI implementation, philanthropy is an important complement to, but not a substitute for, public funding. The financial flows

are typically targeted at field-level projects, and only in a few cases (e.g., protected area establishment and management) could recipients be government agencies and thereby directly contributing to the NLBI implementation. Because sustainable forest management is not, fundamentally, a charitable endeavour, it is unlikely that philanthropic sources would become a major source for its financing. Furthermore, the current financial crisis, reducing the asset value of portfolio investments, is likely to significantly limit short- and medium-term increases from these sources.



CHAPTER FOUR

Emerging Instruments and Mechanisms for Forest Financing

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Since the mid-1990s, great expectations have been put on the development of payments for environmental services (PESs) as a possible source of revenue from, and funding for, SFM. These expectations have not materialised for a number of reasons (e.g., El Lakany, Jenkins, and Richards 2007; Pagiola, Bishop, and Landell-Mills 2002; Landell-Mills and Porras 2002). From the international perspective, the PES schemes of global public goods from forests (climate change mitigation and biodiversity) have been seen as the most promising way to raise additional financial flows to SFM in developing countries. Regulatory arrangements like the Clean Development Mechanism (CDM) have not (yet) proved effective in addressing the needs for afforestation and deforestation in developing countries. Also in the case of other PES schemes, the experience in developing countries continues to be limited (mainly in Latin America), while they are widely being applied in many developed countries.

In this section, the voluntary carbon markets are first reviewed, followed by a discussion on REDD as a potential financing instrument and on related country initiatives on climate change and tropical forest conservation. PES initiatives and instruments other than carbon-related are then briefly discussed because these topics have been covered by the recent stock-taking exercise by El Lakany, Jenkins, and Richards (2007). Finally, the potential of the proposed Global Forest Partnership is discussed.

4.1 CARBON OFFSET MARKETS

The two major mandatory markets for carbon offsets, the Kyoto Protocol's Clean Development Mechanism (CDM) and the European Union Emission Trading Scheme (ETS), were valued at US\$64 billion in 2007, or more than double the previous year. They have proved to be efficient and effective, but only the former has covered forest carbon offsets, albeit on a still very limited scale (only one forest carbon project has been formally endorsed by the CDM Executive Board¹). Twenty-seven projects are in the process of validation, with a total amount of credits of 2 million tons carbon dioxide (CO₂)². This shows that despite a strong potential supply of afforestation/reforestation (A/R) credits, the CDM has been slow in mobilising it. The non-Kyoto-regulated markets in the United States and Australia (New South Wales) cover forest carbon offsets, but also they are still small compared with the Kyoto-regulated CO₂ markets. Three problems have made CDM financing cumbersome in forestry: (i) there is a delay of one to two years in getting CDM projects approved, (ii) transaction costs are so high that smaller projects are not viable,

1. Guangxi Watershed Project in China.

2. <http://cdm.unfccc.int/Projects/review.html> (accessed 26 September 2008).

and (iii) particular characteristics of forestry projects related to additionality, leakage, and permanence hinder forest CDM project approval.

The voluntary market for carbon credits was US\$331 million in 2007, or more than three-fold the 2006 level. The voluntary over-the-counter (OTC) markets are currently the only source of carbon finance for avoided deforestation, and they have a higher proportion of forestry-based credits out of total market transactions than the CDM (36 percent for OTC vs. 1 percent for CDM). Moreover, the voluntary markets seem to be particularly favourable for smaller offset projects (Hamilton et al. 2008). This indicates that in spite of small volumes, there is a significant forest carbon offset demand that cannot be channelled through the regulated market and is therefore traded in the voluntary market. In the short run, this unregulated market is likely to play a critical role in developing new ways of implementation because the regulatory market is still incipient. Many buyers are purchasing the voluntary offsets at attractive prices, expecting that these may be used to comply with future regulations or resell them.

4.2 REDUCED EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION

4.2.1 REDD as a Policy Instrument

The Stern report (2006) made it clear that avoiding deforestation would be among the lowest-cost mitigation options to avoid increasing CO₂ emissions and possibly also increasing sinks, as well as enhancing other benefits like biodiversity conservation, poverty reduction, and climate change adaptation. Through carbon revenue, prospects for the economic viability of SFM in natural tropical forests are expected to substantially improve because at least part of the ecosystem services that these forests provide could be remunerated. Through the adoption of the Bali Action Plan by the UNFCCC Conference of Parties (COP-13) in Bali, December 2007, it is clear that avoided deforestation will be part of the international climate change arrangement after 2012. The COP decision, 'Reducing emission from deforestation in developing countries: approaches to stimulate action', encourages parties to explore a

range of actions, identify options, and undertake efforts to address the drivers of deforestation. The decision also encourages support to capacity building, technical assistance, facilitation of the transfer of technology, and addressing the institutional needs of developing countries to estimate and reduce emissions from deforestation and degradation.

At present, practically all stakeholder groups consider REDD compensation as a win-win instrument, but for a variety of reasons. For tropical country governments, REDD represents a new source of financing for national priorities like health and education; for donor countries, it is a low-cost option for carbon offsets; for environmental NGOs, REDD can generate additional resources for biodiversity conservation; for the rural poor, REDD can generate badly needed income and financial support to community development, as well as serve as a means to improve their forest tenure rights; for the private sector, REDD can be an additional source of funding to make SFM in natural tropical forests and land restoration financially viable; for multilateral development banks, REDD can open up new ways of doing business in the context of maintenance of global public goods; and for intergovernmental organisations, it offers a new area of intervention in technical assistance and a new funding source.

Meeting such a broad range of interests will, however, be difficult. Several issues need clarification, and therefore the COP Decision 2/CP.13 calls for consideration of policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests, and enhancement of forest carbon stock in developing countries. This holistic view means that both emission reductions and SFM are promoted. The Bali Action Plan calls also for capacity building and demonstration to find suitable ways for REDD implementation. In addition, ways should be found to address key issues (see section 4.2.3) in advance to avoid backfiring effects, as has happened in the case of promotion of land-based biofuels utilisation. The unique win-win opportunities of carbon financing instruments (CDM, REDD, voluntary markets, etc.) mean that they can also enhance synergies between international instruments related to forests, including UNFCCC, CBD, UNCCD, and the NLBI. This would, however, mean that coordination has to be scaled up within a holistic forest framework.

4.2.2 REDD Implementation

There are at least two main implementation options for an international REDD agreement: (i) market-based carbon offsets and (ii) an international funding mechanism that would not result in carbon credits. The market-based option could be further distinguished as national-level and project-based offsets. The current perception is that the market option could best achieve the targeted REDD objectives because its capacity to mobilise funding is probably largest. At the same time, some of the key issues (see section 5.2.3) could be effectively addressed through a combination of international- and national-level rules of operation. On the other hand, the public-funding-based second option has also received strong political support (e.g., Brazil), and it could be designed in such a way that it can provide advantages similar to those of the market-based approaches (apart from carbon offset credits for buyers or sources of funding). Payments could be made upon verified performance, which can be calculated in the same way, using baselines and reference scenarios. In the funding approach, necessary upfront costs could eventually also be financed, for which other arrangements would be needed in the market-based approaches. The fund option could, however, suffer from problems of transparency, accountability, low volumes, and (in general) more risk for predictability (e.g., Global Mechanism 2008b).

Market-based approaches have the benefit of being transparent and flexible (particularly in case REDD credits are fungible with other carbon credits), and they provide a strong incentive for large, fairly predictable financial flows under clearly defined rules of transaction. Different views on the REDD implementation options may significantly delay achievement of consensus, and thereby formal launching of the instrument. In the meantime, it is important to gain practical experience as called for in the Bali Action Plan.

4.2.3 Issues and Concerns

The rapidly accumulating analytical literature³ suggests that several issues and concerns should be clar-

3. For example, Boccucci et al. (2008); Forest Peoples Programme (2008); Gardiner (2008); Leach (2008); Peskett and Harkin (2007); Putz and Zudeima (2008); Scholz and Schmidt (2008); Skutch (2008); Wainwright (2008).

ified before agreement on the operational REDD arrangements can be achieved.

Policy Issues

- Uncertainty about achieving co-benefits in poverty reduction, livelihoods of the rural people, biodiversity conservation, and other environmental services, as well as sustainable management of forests; there is lack of clarity on how trade-offs between various objectives (climate change mitigation, biodiversity, poverty, etc.) can be addressed in specific situations.
- Risk for violating the rights of indigenous and other local populations concerning the use of forest areas and possible negative impacts of the separate ownership rights of carbon on other rights over forests and trees.
- REDD's impact on land prices, which may adversely affect land ownership and tenure of indigenous and other local people.
- Uncertainties about to what extent and how payments for REDD credits can be distributed to the rural people and what other benefits smallholders, farmers, and communities can obtain from REDD schemes; there is an additional concern about how to avoid the majority of payments being captured by elites or the state.
- REDD may act as a perverse incentive if it leads to an increase in the deforestation rate before a country enters into the system, to have an artificially low reference scenario, based on which improved performance is afterwards rewarded.
- Risk of limiting access to REDD financing to only forest-rich countries has equity implications. Many of these countries belong to the middle-income countries, and therefore most of the least developed countries would not benefit from REDD.
- Another related concern is that those countries that have already addressed deforestation are not compensated; rather, they may often be penalised because their reference scenarios may be more demanding than in those countries where deforestation is still rapid. Differences in marginal costs between countries also need consideration because in the former cases, additional reductions are likely to require higher investments in relative terms than in the latter.

- How REDD could address land degradation in areas that have already been deforested, including restoration of these lands to create new carbon stocks. This is associated with possible exclusion of drylands and other low-carbon-intensity forest lands from the REDD mechanisms. Creation of such carbon stores through reforestation will suffer from significantly reduced market competitiveness compared with avoided deforestation, but their co-benefits would be highly significant because drylands tend to suffer from extreme poverty. Furthermore, there is lack of clarity on how adaptation in forestry can be financed to avoid further land degradation and desertification, and on how forest carbon stocks on and around the margin of forests could be incorporated.
 - Underlying causes for deforestation and forest degradation are planned to be addressed in the national REDD strategies in participating countries, but it is unclear how this can be done in practice.
 - Lack of understanding about the fact that in natural tropical forests, harvesting does not necessarily lead to immediate or short-term carbon emission from felled trees because products made of tropical timber have typically long life cycles. In the long run, re-growth is invigorated after the removal of trees in selective cuttings practised in these forests. This is associated with the common perception that carbon stock has to be maintained at stand level, while from the management perspective, assessment should be made over a forest management unit representing stands in different stages of forest dynamics.
- elaboration and implementation of national REDD strategies.
- There is lack of clarity on whether a market mechanism or a fund mechanism will be applied; this is associated with the (probably unfounded) concerns about possible flooding of the carbon offset markets with REDD credits, impacting general CO₂ prices and thereby efficiency and effectiveness of all carbon trading instruments. Related to this is the issue of possible fungibility of REDD credits with other CO₂ credits.
 - In the case of market mechanism, there is an additional concern about how significant upfront costs could be financed from other sources because carbon payments would be made upon performance.
 - Transaction costs at both international and in-country levels may prove to be high because of complex implementation modalities. An excessively high share of REDD payments may be captured by the intermediaries of the financial markets where the carbon offsets would be traded.
 - Independently from which approach is applied, there are additional needs for co-financing of complementary activities to ensure that REDD benefits are created in practice, particularly building up country capacity to implement necessary measures to reduce deforestation. However, their financing is an open question.
 - Experience has shown that processes to revise legislation and strengthen governance to make REDD schemes work in practice are usually very slow, while the current supply of REDD funds is calling for accelerated implementation to make use of the present window of opportunity.

Implementation Issues

- The level of REDD application (national, sub-national, or project) has not yet been defined. There are particular concerns about accountability of national-level REDD credit schemes compared with project-based credits, which in spite of their higher transaction costs can ensure delivery of agreed credits.
- Governance arrangements of REDD schemes need to be defined at both national and international levels to ensure transparency and balanced decision making.
- Lack of clarity about appropriate common approaches for stakeholder participation in the

Methodological Problems

A number of methodological problems need also to be resolved before REDD can take off on a larger scale:

- Definition of forest degradation
- Data collection methods for required accuracy and frequency at acceptable cost
- Establishment of baselines and reference scenarios
- Measurement of carbon in the absence of reliable research and resource assessment data on carbon density of forests, which varies extensively between countries, biogeographical zones, forest types, site conditions, etc.

- Monitoring mechanisms and verification standards, including associated standards for SFM to ensure sustainability
- Duration of REDD credits

In addition, REDD credits, like all forest carbon credits, will also be influenced by concerns related to permanence; leakage; temporal variation of the forest carbon cycle; and climatic, social, and economic risks.

Some of the above issues can be addressed through international regulation, and some through appropriate measures in national REDD strategies. However, many are cross-cutting themes and need to be considered holistically (e.g., in the context of national forest programmes or similar broader strategies). Independently from which approach is applied, there are additional needs for co-financing of complementary activities to ensure that REDD benefits are created in practice, particularly building up country capacity to implement necessary measures to reduce deforestation.

It is of critical importance to address the governance issues related to REDD (in particular, the complex issues related to equitable sharing of benefits, resource rights, and regulation related to forest management and environmental conservation). In addition, reduction of illegal land-use conversion and logging is often constrained by weak institutional capacity and corruption, which cannot be eliminated in the short run because of flawed economic incentives and other structural underlying reasons.

The above list of issues also suggests that there are unlikely to be one-size-fits-all solutions, and in many cases, a combination of approaches may be needed to move forward, particularly in the initial stages (Ebeling and Yasue 2008).

4.2.4 Forest Carbon Partnership Facility

Building on the positive experience of the BioCarbon Fund and its own analytical work (notably Chomitz 2006), the World Bank has spearheaded the development of REDD financing by the establishment of the Forest Carbon Partnership Facility (FCPF). The purpose is to assist developing countries in their efforts to reduce emissions from deforestation and degradation and to build capacity for REDD activities. FCPF will test a programme of performance-based incentive payments in approximately 20 developing tropical and sub-tropical pilot

countries. The objective is to create an enabling environment and a body of knowledge and experience that can facilitate the development of a much larger global programme of incentives for REDD over the medium term (5–10 years).

FCPF has two elements:

- (1) The Readiness Fund will build up specific capacity in participating countries to implement the REDD scheme. This will include, inter alia, (i) assessing historical emissions from deforestation and degradation; (ii) projecting emissions from deforestation and degradation into the future, using a national reference scenario; (iii) preparing a national REDD strategy, with proposals for policy and regulatory changes and specific actions to achieve the planned emission reductions in the form of development programmes or the like, as well as design of mechanisms for distribution of benefits; and (iv) establishing a monitoring system for emissions.
- (2) The Carbon Fund will support a few countries that will have successfully participated in the Readiness Mechanism to finance performance-based payments for REDD policies and measures as an incentive to these countries and their various stakeholders to achieve long-term sustainability in financing forest conservation and management efforts. The Carbon Fund will deliver emission reductions based on evidence that the projected volumes have been realised and verified as per methodologies deemed acceptable by the FCPF participants.

The FCPF's target capitalisation is at least US\$300 million, consisting of US\$100 million in the Readiness Fund and US\$200 million in the Carbon Fund. By May 2008, the World Bank had received donor pledges of about US\$155 million from nine industrialised countries and an NGO to kick-start this initiative⁴. Fourteen countries have been selected for the first phase of FCPF implementation⁵.

4. The donor countries include Germany (US\$59 million), the United Kingdom (US\$30 million), the Netherlands (US\$22 million), Australia and Japan (US\$10 million each), Switzerland (US\$7 million), and Denmark and Finland (US\$5 million each). The US-based The Nature Conservancy also pledged US\$5 million.

5. Bolivia, the Democratic Republic of Congo, Costa Rica, Gabon, Ghana, Guyana, Kenya, Liberia, Madagascar, Mexico, Nepal, Panama, Lao PDR, and Vietnam.

4.2.5 Climate Investment Funds

The World Bank, in consultation with other multilateral development banks (MDBs) and other stakeholders, has developed measures to scale up assistance to developing countries in the mitigation of, and adaptation to, climate change by creating two large climate investment funds (CIFs), which would be new and additional to existing ODA flows.

The first is the Strategic Climate Fund (SCF), which will channel new and additional financing for addressing climate change through targeted programmes. SCF will provide incentives to maintain, restore, and enhance carbon-rich natural ecosystems to prevent these carbon sinks from becoming emission sources and to enhance all the services they provide, including climate resilience or adaptive capacity. SCF will finance piloting of new development approaches and scale up activities aimed at a specific climate-change challenge or sectoral response through targeted programmes. The first programme will pilot national-level actions for climate resilience in a few highly vulnerable countries. SCF attempts to maximise co-benefits of sustainable development, particularly in relation to the conservation of biodiversity, natural resources ecosystems, and ecological processes. SCF has a holistic approach to climate change mitigation and adaptation that is particularly relevant in the forestry sector because of its diverse opportunities to contribute to the SCF objectives.

The second is the Clean Technology Fund (CTF), which is targeted at, inter alia, providing positive incentives for the demonstration of low carbon development and GHG mitigation; promoting scaled-up deployment, diffusion, and transfer of clean technologies; and promoting realisation of environmental and social co-benefits of low-carbon technologies. CTF's country-specific programmes will involve both the private and public sectors, and they will complement GEF and link with the capacity-building programmes of the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP). CTF's grant financing can cover additional costs necessary to make projects viable and will be supplemented by concessional loans and risk mitigation instruments, such as guarantees. In regard to the forestry sector, investments in bioenergy and improvement of the forest industry's energy efficiency and management will fall under the CTF.

As a measure to start implementing SCF within a broader framework to mitigate forest-based emissions and enhance forest carbon sequestration and adaptive capacity, the World Bank is currently developing a Forest Investment Program (FIP), which could address the gaps of SFM financing in the existing and emerging instruments such as REDD schemes. The objective could be to finance investment in developing countries to initiate and implement change towards sustainable forest management, which leads to reduced carbon emissions, enhanced carbon sequestration, and climate-resilient forest ecosystems. The FIP would assist countries in creating this framework and provide financing for upfront investments needed for SFM for various PES schemes and production of timber, non-timber forest products, and various forest-based services. This is deemed necessary because it is unrealistic to assume that low-income developing countries could have the capacity to borrow for pre-financing of investments to generate forest carbon benefits, which are compensated only upon their delivery.

The FIP mechanism is expected to be complementary to FCPF and thereby help ensure its success by addressing (i) implementation of the required policy changes, including the underlying causes of deforestation, which go beyond the forest sector; (ii) the needs of forest populations and those managing forest resources; and (iii) the transformation process of the private sector to invest in sustainable forest management and land use. In addition, the FIP could be a financing channel for countries that cannot have access to REDD mechanisms, but have substantial potential for generating combined mitigation and adaptation benefits through restoration and sustainable management of degraded lands, forests, and watersheds. FIP is projected to be established by the end of 2008 (World Bank 2008b, 2008c).

4.2.6 UN REDD Programme and the Collaborative Partnership of Forests

Because REDD is likely to become a huge undertaking and time is extremely limited, no single initiative is likely to be sufficient for achieving reduced emissions from deforestation and degradation. Many initiatives are in the planning phase, and more are likely to emerge. There is a concern about the coherence of these parallel activities and their efficiency and effectiveness to achieve the intended objectives with-

out having clear coordinating and consolidating mechanisms. It is important that the various initiatives work in concert as much as possible to achieve complementarity and to avoid an unnecessary burden for developing countries to cope with the requirements of various external support initiatives.

FAO, UNDP, and UNEP have developed a recently launched joint UN REDD Programme in developing countries, building on their agency-specific comparative strengths (FAO/UNDP/UNEP 2008). It attempts to facilitate partnerships and contribute to coordination and mainstreaming of in-country efforts. The programme is planned to have two components: (i) assisting developing countries to prepare and implement national REDD strategies and mechanisms and (ii) supporting the development of normative solutions and standardised approaches for a REDD instrument linked with the UNFCCC. Countries participating in the first phase of the programme include Bolivia, the Democratic Republic of Congo, Indonesia, Panama, Papua New Guinea, Paraguay, Tanzania, Vietnam, and Zambia. Norway has donated US\$35 million to the initiative to assist in initial capacity building.

Because coordination will be a key issue in all initiatives targeted at forest sector responses to the climate change agenda and because these responses will be cross-cutting, the Collaborative Partnership on Forests (CPF) has taken an initiative to elaborate a strategic framework for engaging all the key CPF members. Its purpose would be to enhance efficiency in individual agency responses and other initiatives to climate change through cooperation and coordination. CPF's initiative is particularly valuable because of its broad coverage of all the relevant intergovernmental and other international organisations.

ITTO is planning to develop a thematic programme on tropical forests and climate change. It is likely to emphasise forest restoration and sustainable forest management in the mitigation of climate change, addressing vulnerability of forest-dependent people to climate change, and enhancing the resilience of forest ecosystems with their sustainable management. Interventions may include analytical work, capacity building, knowledge management, and information sharing (cf. ITTO 2008). Several other agencies are also working for their own responses to forest initiatives to climate change mitigation and adaptation (e.g., CIFOR, CBD, and IUFRO).

4.2.7 Country Initiatives on Climate Change and Tropical Forest Conservation

The progress made in recognition of the role of avoided deforestation and forest degradation under the UNFCCC has given rise to about 20 initiatives and to some governments in developing countries providing funding for tropical forest conservation. The main initiatives are summarised below.

A fund for the Amazon Forest conservation (Amazon Fund) was launched in August 2008 by the Brazilian government with an initial target of US\$1 billion (to reach US\$21 billion by year 2021). Norway has already pledged US\$100 million to this fund as the first tranche of the planned US\$1 billion contribution over the next seven years. The initiative is important for Brazil for the reasons of image and the recognition of the linkage between climate change, biodiversity, and the rain forests⁶. It also signals the government's will to control the use of funding flows, rather than relying on international PES mechanisms (which have been interpreted as a sovereignty issue)⁷. The fund will support, inter alia, sustainable forest management and production of non-wood timber products by indigenous and other forest communities.

As part of the Congo Basin Forest Partnership (CBFP), the Congo Basin Forest Fund (CBFF) was launched in June 2008 to complement existing initiatives. The purpose is (i) to support transformative and innovative proposals that will develop the capacity of the people and institutions of the Congo Basin to enable them to manage their forests, (ii) to help local communities find livelihoods that are consistent with the conservation of forests, and (iii) to reduce the rate of deforestation. The Fund will provide a source of accessible funding and encourage governments, civil society, NGOs, and the private sector to work together. The CBFF is initially being financed by a grant of US\$100 million from the British government and about US\$116 million by the Norwegian government. All CBFP members and other donors have been called upon to join the Fund. The Fund will be located in the African Development Bank (AfDB), which will also provide logistical and technical support (www.afdb.org).

6. President Luiz Ignacio Lula da Silva's statement at the launching event in Rio de Janeiro, 1 August 2008.

7. Statement by Mr. Roberto Mangabeira Unger, Ministry of Strategy, in the same event.

Australia's International Forest Carbon Initiative (IFCI) will support international efforts to reduce deforestation through the UNFCCC. This 200 million Australian dollar (AUD 200 million, or about US\$186 million) initiative for REDD is focused on increasing international forest carbon monitoring and accounting capacity; trialing approaches on methodological, technical, and policy issues necessary to demonstrate robust and verifiable action on REDD; undertaking practical demonstration activities; and supporting international efforts to develop and evaluate market-based approaches to REDD. In practical demonstration activities and capacity building, the focus is in the Asia-Pacific region, particularly Indonesia and Papua New Guinea. As part of the development of market-based approaches to reducing emissions from deforestation and forest degradation, Australia has provided funding to the FCPF⁸.

Norway has started to implement a programme to achieve rapid, cost-effective reductions in greenhouse gas emissions from deforestation and forest degradation, with the additional aim of establishing mechanisms for regulating such emissions in a new international climate agreement. The upper limit of funding is US\$600 million per year. It is recognised that it will not be possible to agree on an effective new climate agreement if developing countries are left to meet the costs of reducing emissions from deforestation by themselves, and therefore international transfer of capital is needed on a large scale. The Norwegian efforts will focus on large areas of more-or-less-intact tropical forest (i.e., the rain forests in Brazil and the Amazon region, the Democratic Republic of Congo and other countries in the Congo Basin, and Papua New Guinea and Indonesia in Southeast Asia⁹). The large areas of tropical dry forest and savannah, such as the *cerrado* in Brazil and the *miombo* woodlands of southern and eastern Africa (which are important in storing carbon and maintaining biological diversity), are also considered (Ministry of the Environment 2008). Within this framework, Norway has already made commitments through bilateral cooperation with Brazil and Tanzania. Support to multilateral initiatives include FCPF, the Congo Basin Forest Fund at AfDB, the UN Collaborative Programme on

REDD, and the Global Mechanism's Initiative 'Integrated Financing Strategies for UNCCD Implementation' (Global Mechanism 2008b). In addition, support will be provided to research, NGO advocacy and implementation, and private sector initiatives.

Japan will establish a new financial mechanism, Cool Earth Partnership, on the scale of US\$10 billion. Through it, Japan will cooperate with developing countries' efforts to reduce emissions, such as efforts to enhance energy efficiency (about 80 percent of the funding). The Partnership will also include support to adaptation activities (about 20 percent). Japan's additional financial support to forests is likely to be channelled through the Cool Earth Partnership. In addition, Japan aims to create a new multilateral fund for climate change, together with the United States and the United Kingdom¹⁰.

The above initiatives illustrate that there is readiness for action and willingness for financing. Many recent decisions by donors will mobilise significant new resources for forest financing in the future, even though their total magnitude is still difficult to estimate. Nevertheless, these initiatives, together with various market-based or fund-based financing schemes, have potential to at least double the current financial flows from the international community to forests in developing countries. It needs to be noted that many of them are targeted at the same countries that have also been identified as priority, forest-rich countries for REDD schemes.

On the other hand, they raise the issue of coordination among various initiatives and funding mechanisms. There is a risk that funding will be driven by the sources, not demand, and that overlapping mandates between initiatives will emerge. This may happen (for example) in the Congo Basin, where several initiatives are already or will be working without a coordinating mechanism (Box 4.1). There is a need for harnessing synergies between new and emerging financing mechanisms addressing forest-related global concerns, particularly those related to climate change (Kutter 2008). Although harmonisation between independent initiatives as an objective may not be realistic, and not even appropriate, there is a need for cooperation and coordination based on comparative advantages and available financial and human resources.

8. www.climatechange.gov.au.

9. These are the same areas that are targeted by (for example) GEF's Tropical Forest Account, as well as many other bilateral donors and environmental NGOs.

10. www.mofa.go.jp/policy/economy/wef/2008/.

Funding Initiatives in the Congo Basin

Initiative	Funding (US\$ millions)	Focus
Congo Basin Forest Partnership	100	Implementation of the Plan of Convergence of the Congo Basin
Forest Carbon Partnership Facility	15	REDD readiness for market finance
Global Environment Facility	60	Sustainable forest management and multiple global benefits
Congo Basin Forest Fund	200	Knowledge management, sustainable finance, poverty reduction
AFD-NGO Partnership (WWF, WCS, CI)	15	Policy support, public dialogue, technical capacity
UN REDD Programme	30	Capacity building for UNFCCC compliance
Prince's Rainforest Project	50	Private sector, social and environmentally responsible finance
Critical Ecosystem Partnership Fund and other conservation funds	n.a.	Biodiversity hotspots, protected areas

Sources: Kutter (2008) and section 4.
n.a.= not available.

4.3 PAYMENTS FOR FOREST ENVIRONMENTAL SERVICES OTHER THAN CARBON

Over the last decade, a growing interest has been given to regulatory, market-based, and other voluntary payment mechanisms for forest environmental services. They are already a major source of funding in many developed countries for conservation of watershed conservation and biodiversity, but (as explained in section 5.2.1) their greatest potential is in climate-change mitigation and adaptation through increase or protection of carbon stocks in developing countries. With a few exceptions in Latin America (mainly Costa Rica, Mexico, and the Andean countries), non-climate-related PES mechanisms play in practice a limited role (which is, however, growing). Various estimates have been presented on the potential size of the PES mechanisms to mobilise funding in developing countries (see e.g., El Lakany, Jenkins, and Richards 2007; Bishop et al. 2008), but these estimates are highly speculative. The actual development of market-based PES mechanisms in developing countries has been slow for several reasons, and also the short- and medium-term potential appears to be limited because of constraints related to the policy and regulatory framework, market creation and promotion, engagement of suppliers, lack of technical and business manage-

ment capacities, etc. (e.g., Bishop et al. 2008; Richards and Jenkins 2007). Payment schemes may therefore have to rely on domestic public sector funding and international support, but in the long run, the prospects for market-based solutions appears bright, and these could offer a significant potential measured in billions of dollars for sustained financing of forest environmental services.

Expansion of PES mechanisms can occur if schemes can demonstrate clear additionality (i.e., incremental conservation effects vis-à-vis predefined baselines), if PES recipients' livelihood dynamics are well understood, and if trade-offs between conservation and income generation are balanced. PES mechanisms have both potential and risks in regard to poverty. They can be best suited to scenarios of moderate opportunity costs on marginal lands and in settings with emerging, not-yet-realised threats to forests. PES mechanisms are a win-win instrument because they can benefit both buyers and sellers while improving the natural resource management by internalising sustainability costs. However, they are unlikely to fully replace other conservation instruments (cf. Wunder 2006).

It is clear that PES mechanisms will be ineffective unless the legal, policy, and institutional framework is improved because lack of secure tenure, weak compliance, corruption, etc., increase risks and transaction costs. For this to happen, developing countries need financial support for necessary

upfront investments to install adequate legal and policy framework, to establish necessary institutional arrangements, to set up the transaction mechanism, to build capacity among actors (including forest owners and communities), and to raise awareness among stakeholders and the general public. PES mechanisms, though not a panacea, can help address the market failure problem of forestry and provide a critical element of revenue stream for SFM.

It appears that an effective and equitable solution to a public goods problem (e.g., ecosystem protection) may not be possible without appropriate compensation for the public goods providers and effective regulation of the environmental and social externalities. Therefore, governments and the international community must play a much more effective role than they have to date (Richards and Jenkins 2007). Support is needed to generate realistic understanding of the possibilities of PES schemes; necessary preconditions for their effective implementation; and needs for financing of upfront investments in capacity building, information system, and setting up of appropriate voluntary and regulatory payment mechanisms with intended equity impacts. The recent Country-Led Initiative

(CLI) on Financing of Sustainable Forest Management, held in Suriname in September 2008, underscored the importance of sovereignty issues in the context of developing a PES mechanism.

4.4 OTHER EMERGING INSTRUMENTS OF FOREST FINANCING

A range of new instruments is being developed to complement the menu of traditional lending and equity investment in the forest sector. These include (i) eco-securitisation and forest-backed bonds, (ii) forest insurance and re-insurance, (iii) application of sustainability safeguards, and (iv) corporate-smallholder/community partnerships (see El Lakany, Jenkins, and Richards [2007] for description). These address some of the constraints related to forest financing in general, such as upfront financing of long-term forest investments (particularly plantations) and risk management against natural disasters. Eco-securitisation and insurance are important strategic instruments that would greatly facilitate private sector investment in forestry, but (with few exceptions) they are still at development stage and often need external support.



CHAPTER FIVE

Gap Analysis

The following analysis is based on (i) the estimated needs and potential of financing for SFM, (ii) the previous review of the current sources of funding (section 4), and (iii) emerging instruments and initiatives (section 5), with a purpose to identify geographic and thematic gaps in the international forest financial architecture.

5.1 FINANCING NEEDS AND INVESTMENT POTENTIAL FOR SUSTAINABLE FOREST MANAGEMENT

The difficulties of estimating financing needs for implementing sustainable forest management have been recognised in many earlier reports since the United Nations Conference on Environment and Development (UNCED) in 1992. The same problem also applies to estimating financing needs for conserving biodiversity and addressing land degradation. The problem has three main dimensions:

- (i) estimating opportunity costs of preventing deforestation or forest degradation or conserving forest environmental services
- (ii) investment needs to manage existing forests sustainably and to create new forests through planting for production purposes or for restoration of degraded forests and lands (these multiple purposes are often combined in practice)

- (iii) upstream or complementary investment in capacity building, information systems, research, technology transfer, development of financing mechanisms and their promotion, and other development costs

It is common in various studies and reports that these three aspects get mixed up, particularly when estimates from different sources using different assumptions and methodologies are combined. This tends to inflate the estimated values (see, for example, Blaser and Robledo 2008).

Several estimates for financing needs for SFM in tropical forests have been made through ITTO surveys of national needs estimated by governments and by expert assessments based on different assumptions (cf. summary in Tomaselli 2006). They have, however, proved to be of limited value because of the wide range of estimates and the general tendency by some individual countries to overestimate their own needs because it may influence their future ODA or other incoming financial flows.

The most comprehensive effort to assess financing needs for the forestry sector has probably been carried out by UNFCCC (2007). The results were targeted at identifying opportunity costs of the main mitigation options: (i) reduced deforestation, (ii) better management of productive forest, and (iii) afforestation and reforestation as a means to increase forest area. UNFCCC presented the oppor-

tunity costs to reduce deforestation and forest degradation based on regional estimates of the key drivers (commercial agriculture, subsistence farming, and wood extraction), relating them to regional/sub-regional current deforestation rates (Appendices 5.2 and 5.3)¹. The opportunity costs of the 12.9 million hectares deforested per year in the tropics (FAO 2005) were estimated at US\$12.2 billion per year, which does not include investment or maintenance cost of alternative land use. Neither administrative and transaction costs nor upstream associated investment and other costs for achieving emission reductions are included.

In addition to opportunity costs, the costs of sustainable management of tropical and sub-tropical production forests (602 million hectares [ha]) were estimated. The unit annual cost was taken as US\$12/ha, resulting in about US\$7.2 billion per year. In the Non-Annex I Parties² with temperate and boreal forests, a higher unit cost (US\$20/ha) was used, based on Whiteman (2006), resulting in another US\$1 billion. The total opportunity costs in developing countries would consequently amount to about US\$8.2 billion per year.

UNFCCC (2007) estimated the mitigation potential of afforestation and reforestation (A/R) at 4.6 million ha—8.2 million ha by 2030. Applying the Intergovernmental Panel on Climate Change (IPCC 2007) unit establishment cost, which was US\$654/ha for good sites (lower end), resulted in about US\$120 million per year, and at US\$1,580/ha for difficult sites (higher end), resulted in about US\$350 million per year for this climate-change mitigation option in non-Annex I countries. More than two-thirds of the global mitigation potential by forests is located in developing countries, of which REDD can generate 40 percent, and afforestation/reforestation and forest management 30 percent each (IPCC 2007) (Appendix 5.1). It is therefore clear that the estimates for A/R are not reflecting the entire potential of afforestation and reforestation in developing countries because they refer only to lands that are eligible for the CDM (i.e., which were not forest in 1990) (cf. Trines 2007).

In summary, the UNFCCC (2007) estimates for developing countries³ were as follows:

1. The reference scenario was the deforestation rate in 2000–2005 reported by FAO (2005).

2. These belong to the group of developing countries.

3. Non-Annex I Parties of the UNFCCC.

	US\$ billions/year
Opportunity costs for REDD	12.2
Sustainable forest management costs	8.2
Afforestation/reforestation costs	0.1–0.4
Total	21.0

The regional breakdown for the opportunity costs of the first two mitigation options is given in Appendix 5.2, which shows that if the distribution of REDD payments among countries would reflect the respective REDD opportunity costs, the main beneficiaries of the mechanism would be the Asia-Pacific region (40 percent of the total), followed by Latin America and the Caribbean (31 percent) and Africa (21 percent), while the balance would be for Mongolia, the Russian Federation, and other countries. From the equity perspective, it appears that the share of small-scale subsistence farmers, shifting cultivators, and communities would be about 20 percent of the total if opportunity costs are used as a guide in the allocation of payments, although they are assumed to account for almost half of the global annual deforestation rate (Appendices 5.2 and 5.3).

The above estimates do not include agroforestry, which under the UNFCCC is classified as part of agriculture. The respective estimate for required investment and financial flows would be US\$15 billion per year for this activity, mainly to pay for the upfront transition costs from traditional crop production/livestock husbandry to agroforestry, which in itself would be profitable (UNFCCC 2007).

These estimates are no more than indicative by nature. They consider only the climate-change mitigation aspects of forests, not what is required for the NLBI implementation, but they are probably useful for understanding the orders of magnitude. The estimates also have several limitations, such as (for example) inherent weakness of opportunity costs to capture other decision criteria of land owners and communities (e.g., food security, liquidity of assets, financial and natural risk mitigation), assessment of opportunity costs of forest degradation, double-counting related to forest management as opportunity cost and management cost, possible underestimation resulting from conservative scenarios adopted, and apparent underestimation of afforestation/reforestation as a mitigation option⁴. Further-

4. IPCC's (2007) estimate suggests only 184,000 ha to 348,000 ha per year for afforestation and reforestation.

TABLE 5.1
Forest Investment Potential by Country Group

Deforestation rate/ relative forest cover	Low-forest-cover countries	High-forest-cover countries
Countries with high deforestation rate	REDD: high/medium potential SFM: low/no potential A/R: high potential Restoration: high potential	REDD: high potential SFM: high potential A/R: high potential Restoration: high potential
Countries with low deforestation rate	REDD: low/no potential SFM: low/no potential A/R: high potential Restoration: medium potential	REDD: medium potential SFM: high potential A/R: low/medium potential Restoration: low potential
Countries with zero deforestation/ increasing forest area	REDD: no potential SFM: low potential A/R: medium potential Restoration: low/medium potential	REDD: no potential SFM: high potential A/R: low potential Restoration: low/no potential

Source: Author's assessment.

more, the extensive variation in unit costs and local forest conditions is not probably adequately captured in the underlying estimated average regional costs for the opportunity costs and SFM costs.

A qualitative attempt to characterise investment potential in developing countries is given in Table 5.1, which illustrates where future investment in SFM, REDD, afforestation and reforestation, and forest restoration could be directed. There is a vast gap in all areas because the current financing mechanisms cover only a fraction of the estimated needs, as can be seen in Table 5.2. As a comparison, in forest management the targeted financing is mainly coming from ITTO (about US\$11 million per year) and some donor sources. In afforestation and reforestation, the CDM funding is still in initial stages, with only one project approved. The BioCarbon Fund has provided about US\$10 million per year. The voluntary carbon market for forest conservation and reforestation was about US\$50 million in 2007. The emerging funding sources and mechanisms will increase the funding volume, but their future contributions are still largely uncertain, and it is apparent that they will not be able to meet all the needs for SFM.

Climate change adaptation would also require financing, but the (additional) needs are even more difficult to estimate than in the case of mitigation options. In forest management, there would be both direct costs (protection against fire, pest, and dis-

eases; additional measures for biodiversity protection; soil and water conservation; etc.) and indirect costs (caused by changes in species selection, silvicultural regimes, rotation periods, etc.), which could lead to loss of revenue compared with non-adaptation situations. UNFCCC (2007) estimated these costs for all sectors at about 2 percent of the additional level of investment needed to pay for additional measures and relocation of operations of wood industry and pulp and paper production. These costs have not been separately estimated for adaptation in forest management. Whatever the adaptation costs in the forestry sector may prove to be, they could be partly supported by the public funds (such as the Adaptation Fund and GEF), depending on the competitiveness and urgency of forestry measures compared with other adaptation needs. The total needs for funding of adaptation appear to be many times higher than the projected revenue from the levy, limiting the Fund's role.

None of the above estimates consider investments in capacity building of governments, smallholders, communities, and other stakeholders and other upfront investment costs that would be needed in the first place to make any carbon payment system work in practice.

There are no comprehensive estimates available on financing needs to conserve forest biodiversity. The ninth Conference of Parties of the CBD held in April 2008 made a decision to carry out an assess-

TABLE 5.2
Summary of Main Forest Financing Sources and Their Gap Areas

Source	Annual funding volume (US\$ millions)	Main focus areas (forestry)	Gap areas
Bilateral donors	1,100	Capacity building, catalytic investments	Mainstream investment
World Bank Group	587	Poverty reduction, sustainable development, global environmental services	Mainstream investment
Regional development banks	94	Forestry for sustainable economic development, environmental conservation	Mainstream investment
GEF	109	Agreed incremental global benefits from biodiversity, land degradation, and climate change	Investment in SFM in production forests
ITTO	16	Capacity building for SFM from sustainably managed forests	Mainstream investment
BioCarbon Fund (BioCF)	10	Afforestation and reforestation pilot projects, avoided deforestation	Mainstreaming to meet the demand in developing countries
Forest Carbon Partnership Fund (FCPF)	25e	REDD readiness building REDD carbon emission reduction offsets	Broader capacity building beyond REDD mechanisms Upstream investment for achieving emission reduction
UN REDD Programme	12e	Specific capacity building for REDD mechanisms through technical assistance	Capacity building for implementing SFM for REDD
Strategic Climate Fund (SCF)—PPCR	80e	Improve climate resilience Incentives for maintaining carbon-rich ecosystems	Forest Investment Program Under planning
Clean Technology Fund (CTF)	1,000–2,000e	Incentives for clean technologies (biodiversity utilisation and industry efficiency)	Forests not covered
FAO and NFP Facility	48	Technical assistance, support to national forest programmes	Mainstream investment
Adaptation Fund	..	Adaptation measures in countries that are particularly vulnerable to the adverse effects of climate	Coverage will possibly include ecosystem services
UNFCCC/CDM	::	Afforestation/reforestation offsets	Only one forest project approved 27 in the pipeline
Conservation funds ^a	..	Biodiversity hotspots and other protected and conservation areas	Poverty, forests outside protected areas

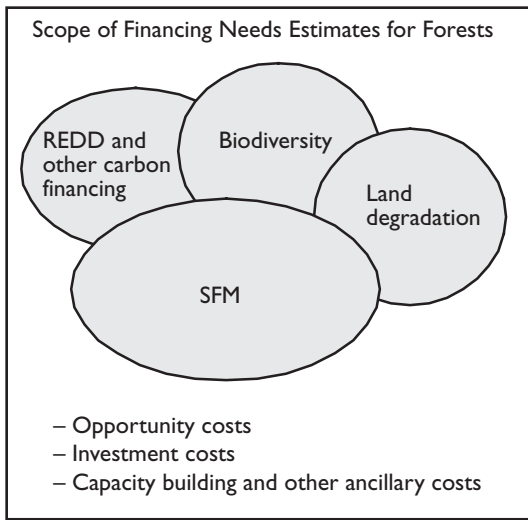
Note: Private sector, philanthropy, and similar sources are not included.

a. For example, Critical Ecosystem Partnership Fund, Amazon Fund, and Congo Basin Forest Fund.

ment of the Parties' future funding needs based on their updated national biodiversity strategies and action plans. Neither the investment needs for preventing land degradation nor those for restoration of degraded lands under the UNCCD (and its Global Mechanism) are included. However, the costs of land degradation are estimated at US\$65 billion per

year, and the current international investment is about US\$4 billion. Even in the absence of information on the breakdown of these estimates, it is apparent that the UNFCCC (2007) estimates summarised above for afforestation/ reforestation do not cover the full needs for forest restoration in the UNCCD member countries.

FIGURE 5.1
Overlapping Scope of Estimates of
Financing Needs Related to Forests



In spite of the lack of information on biodiversity and land degradation, it is important to recognise that there is a substantial overlap between the investment and other financing needs of (i) climate mitigation and adaptation, (ii) sustainable forest management, (iii) conservation of biodiversity in forest ecosystems, and (iv) prevention of land degradation and restoration of degraded lands (Figure 5.1). In the context of forest carbon financing, this overlap is referred to as co-benefits. In the context of SFM, climate and biodiversity benefits are part of the multiple forest management objectives. In the context of land restoration, forest interventions result also in wood and non-timber forest product (NTFP) production, new habitats are created for biodiversity, etc. Among these different strategic areas related to forest ecosystems (which are overlapping by definition), there is also a significant element of overlap in administrative and transaction costs and upstream associated investment and other costs to make various financing mechanisms effective (resource assessment and inventories, monitoring systems, planning, education and training, research and development, transfer of technology, etc.). Adding up various 'sectoral' estimates would therefore need an analysis of overlap and synergies in implementation measures to avoid double-counting.

From the viewpoint of the NLBI implementation, it needs to be recognised that the Global Objectives on Forests cover enhancing forest-based

economic, social, and environmental benefits (GOF2) (including climate mitigation and other environmental services), protected areas (GOF3), and restoration (GOF1), which are further elaborated under various national measures and international cooperation. In view of the other existing international instruments, the value added of the NLBI is in its holistic, integrating nature, covering the forest-related elements of the other international instruments. However, estimating the respective financing needs is particularly complex for the same reason.

5.2 GEOGRAPHIC ANALYSIS

The geographic analysis was made based on the data on the presence of individual bilateral and multilateral sources⁵ in recipient countries during 2000–2007⁶ because the quantitative survey data did not allow an adequate analysis for the funding volumes⁷. Presence is measured in terms of actual funding of a source in the country during 2000–2007. The results are reported in Table 5.3 for geographic regions and economic and forestry groupings of countries.

In general, most countries have some ODA flows to forests, but there are 30 countries where no source has been reported. Most of them are small island states, particularly in the Pacific and the Caribbean. The highest donor presence is found in South and Southeast Asia, where there are (on average) 8.4 external sources per recipient country. Also Central and South America are relatively well covered by donor participation. In addition to small island states, low levels of financing-source presence are found in Africa as a whole and in Western and Central Asia.

With regard to income level (Table 5.4), external-source presence is higher in low-income countries than in middle-income countries, but the difference is not very substantial (83–84 percent and 73–80 percent of the total number of countries in the group, respectively). However, the least developed countries have (on an average) less external

5. The sample data covered 19 financing sources.

6. In the case of some donors, the analysis also included recipient countries before 2000.

7. See section 4.2.2 on the breakdown of OECD/DAC data, which however does not cover the total ODA flows.

TABLE 5.3

Geographic Analysis of Recipients of External Bilateral and Multilateral Forest Financing by Region

Region	Total number of countries	Number of countries with no external source	Average number of sources per country
Eastern and Southern Africa	18	2	4.4
Northern Africa	16	2	2.9
Western and Central Africa	22	1	3.5
Africa	56	5	3.6
South and Southeast Asia	16	3	8.4
Western and Central Asia	19	3	1.9
Asia	35	6	4.9
Eastern Europe	10	1	2.3
Caribbean	16	7	0.9
Central America	6	0	6.7
South America	12	0	7.0
Latin America	34	7	4.1
Oceania	16	11	0.8
Grand Total	151	30	..

Source: Compiled based on 19 external sources of ODA in the survey data.

financing sources utilised per country (3.7) than in other low-income countries (5.3) and lower-middle-income countries (4.2). This may mean more risks in financial flows resulting from dependence on fewer donors.

Surprisingly, the degree of indebtedness of a country correlates negatively with the average number of donors (i.e., the higher the degree of indebtedness, the less external forest-financing sources active in the country. This may be explained by the fact that many highly indebted countries may have few forests left, and therefore the importance of this natural resource is not recognised.

There is significantly more donor presence among the countries that are net exporters of forest products compared with that of net importers. Net exporting countries also have more external sources per country (4.7) than net importers (3.6). This may also be explained by the limited forest resources in the latter countries.

Similar observations can be made on the degree of forest cover. Countries that have less than 20 percent of their territory under forests have clearly less external-financing-agency presence than countries where the forest cover share is 20–60 percent.

However, when the forest cover is above 60 percent, the presence of bilateral and multilateral sources is again reduced, suggesting less interest in supporting SFM in production forests.

Most countries in which deforestation is recorded have fairly strong presence of external financing agencies (95 percent of countries with 5.1 sources per country, on average). But also countries in which forest area is expanding have significant presence of external financing sources (81 percent of countries with 2.9 sources per country).

Also, protected area coverage of the total forest area has an influence on external financing flows. All the countries where less than 5 percent of forests are protected are ODA recipients, with an average of 5.5 sources per country. When the protected area share exceeds 20 percent, donor presence is reduced, but still significant.

The above analysis by country groups was complemented by compilation of data by recipient countries (Table 5.5). It shows that there are a number of countries where external funding sources have a particularly strong presence, such as Brazil, Ethiopia, Indonesia, Kenya, and Vietnam. Among the countries with 10 or more sources active in

TABLE 5.4
Geographic Analysis of Recipients of External Bilateral and
Multilateral Forest Financing by Selected Indicators

Indicator/group	Total number of countries in the group	Countries with external forest financing (%)	Average number of external sources per country
INCOME			
Least developed	49	83.7	3.7
Other low-income	18	83.3	5.3
Lower middle-income	49	79.6	4.2
Upper middle-income	33	72.7	1.2
Total	149		
NET TRADE IN FOREST PRODUCTS			
Negative	110	78.2	3.6
Zero	5	80.0	3.0
Positive	31	90.3	4.7
Total	146		
EXTERNAL DEBT/GDP %			
Less than 50%	42	88.1	4.8
50%–100%	48	91.7	3.3
Higher than 100%	27	85.2	0.9
FOREST AREA % OF TOTAL LAND AREA			
Less than 20%	67	70.1	2.1
20%–40%	46	84.8	4.3
40%–60%	29	89.7	5.5
More than 60%	20	65.0	2.8
Total	162		
CHANGE IN FOREST COVER IN 2000–2005			
Negative	77	94.8	5.1
No change	48	58.3	0.9
Positive	36	80.6	2.9
Total	161		
PROTECTED AREA % OF TOTAL FOREST AREA			
Less than 5%	25	100.0	5.4
5%–10%	10	80.0	3.3
10%–20%	15	86.7	5.0
More than 20%	35	77.1	3.9
Total	85		

Sources: Calculated based on the survey data on 19 donors; FAO (2005) on forest indicators; FAO (2004) on net trade in forest products; World Bank (2007b) on indebtedness.

TABLE 5.5
Presence of Bilateral and Multilateral Donors Providing
Forest ODA in Developing Countries in 2000–2007

Number of donors in the country	Number of recipient countries	Countries in the group
15	1	Indonesia
14	1	Brazil
13	1	Vietnam
12	2	Kenya, Ethiopia
11	7	Bolivia, Cambodia, China, Honduras, Nepal, Nicaragua, Philippines
10	5	India, Lao PDR, Mexico, Tanzania, Uganda
9	3	Ecuador, Guatemala, Peru
8	4	Burundi, Malawi, Mozambique, Rwanda
7	7	Cameroon, Costa Rica, Malaysia, Pakistan, Panama, Papua New Guinea, Sri Lanka
6	8	Bhutan, Chile, Colombia, Guyana, Madagascar, Mali, Paraguay, Russian Federation, Senegal
5	8	Albania, Dem. Rep. of Congo, Côte d'Ivoire, Gabon, Niger, Thailand, República Bolivariana de Venezuela, Zimbabwe
4	13	Afghanistan, Argentina, Benin, Cuba, Georgia, Kyrgyz Rep., Namibia, Nigeria, South Africa, Suriname, Turkmenistan, Uruguay, Zambia
3	13	Armenia, Bangladesh, Bosnia-Herzegovina, Cape Verde, Eritrea, Fiji, Guinea, Islamic Rep. of Iran, Liberia, Mongolia, Morocco, Sudan, Swaziland
2	19	Belize, Burkina Faso, Central African Rep., Chad, Rep. of Congo, Croatia, Dominican Rep., El Salvador, Guinea-Bissau, Jordan, Kazakhstan, Rep. of Korea, Myanmar, Serbia, Sierra Leone, Tajikistan, Trinidad and Tobago, Ukraine, Uzbekistan
1	29	12 small island states, Angola, Belarus, Botswana, Brunei Darussalam, Arab Rep. of Egypt, The Gambia, Kosovo, Lebanon, Libya, former Yugoslav Rep. of Macedonia, Mauritania, Oman, Palestine, Saudi Arabia, Syrian Arab Rep., Tunisia, Rep. of Yemen
0	30	25 small island states, Algeria, Equatorial Guinea, Dem. People's Rep. of Korea, Western Sahara, Somalia
Total	149	

Source: Compiled based on 19 external sources of ODA in the survey data.

forests, only 6⁸ belong to the group of least developed countries (out of a total of 50). More than 5 forest-financing agencies per country are found in another 10 least developed countries.

In general, the results, together with the review of recipients of the bilateral ODA (section 3.2.3), suggest the following tentative conclusions on gaps:

- A large number of low-forest-cover countries do not receive substantial external support in man-

aging and conserving their forests or tree resources.

- Many small or medium-size countries with still relatively large forests have only limited external support.
- Several developing countries with high deforestation rates (above 1 percent per year) already have significant donor presence, while many others in a similar condition have limited presence or absence of external support (e.g., the Comoros, El Salvador, Mauritania, and Myanmar).
- Many countries with high or medium forest cover (above 40 percent) have only limited pres-

8. Cambodia, Ethiopia, Lao PDR, Nepal, Tanzania, and Uganda.

ence of external financing agencies (e.g., Angola, the Central African Republic, the Republic of Congo, Equatorial Guinea, The Gambia, Guinea-Bissau, the Democratic People's Republic of Korea, Timor-Leste, and Trinidad and Tobago). Countries with very low protected area share in the total forest area, but lacking external support, include (for example) Chad, Jamaica, Kazakhstan, Myanmar, and Sierra Leone.

- With few exceptions, small island countries rarely receive support to forests, although their importance in maintenance of biodiversity, watershed protection, and adaptation to climate change is often critical.
- Low level of external-sources presence in Africa and Western and Central Asia suggest also general financing gaps in these regions.
- Many gaps are presumably partly explained by political reasons and partly by weak governance, which does not allow effective participation of external bilateral and multilateral funding agencies in a complex natural resource sector like forestry, often characterised by strong vested interests resisting any pressures for policy and institutional reforms.
- REDD is unlikely to fill the gaps in the existing external financial flows if its eligibility criteria will emphasise forest-rich, high-deforestation countries, which mostly belong to the group of middle-income countries.

The above observations should be considered with care because the mere presence of external financing sources in a country does not mean that adequate support is available. Absence of external support to forestry is explained by a multitude of reasons, not least the lack of expression on demand for forest financing in poverty reduction strategies and national development plans (cf. section 3). Nevertheless, the results indicate that there are significant gaps in the existing external financial flows to forests.

There is no comprehensive information on the flow of private financing to developing countries. It is however apparent that plantation investments are heavily concentrated in a small number of countries, mostly in Latin America and Asia. There are indications that investments in some African countries are under consideration by institutional investors through TIMOs. Foreign capital in industrial capacity is much more broadly invested across countries

in Asia and Latin America, but Africa is clearly lagging behind.

5.3 THEMATIC AREAS

Only fragmented information on the thematic areas covered by the current external forest financing flows is available. No more than 10 donor agencies were able to provide some disaggregated data following either the DAC classification of forestry ODA or their own thematic classification. The DAC classification does not allow meaningful strategic analysis of forestry ODA (see section 3.2.2). Elaboration of consolidated data by thematic areas would require an analysis of project portfolios of those aid agencies with significant forest ODA. This would involve analysis of hundreds of projects, which was beyond the possibilities of this study. Nevertheless, the following observations can be made based on the review of available information:

- A considerable share of forest ODA is allocated to forest conservation, which is compatible with the principle of supporting enhancement of global public goods.
- In relative terms, SFM outside protected areas appears to be substantially less supported by external funding. Only fairly few donors are supporting SFM in natural tropical production forests, and their funding is clearly insufficient. Although these forests generate important public goods, their maintenance is not compensated to forest managers.
- Private sector financing will be able to take care of most of the investment needs of productive fast-growing plantation development in those countries that have a comparative advantage and adequate investment climate.
- Trade-related initiatives like forest certification will assist producers to internalise SFM costs in product prices, but as long as the market share of certified products remains small in developing countries and low-cost competition continues from illegally and unsustainably produced products, this process will take time. To accelerate adoption of certification and verification of legality, external support would be required.
- Financing of forest restoration will remain a major gap, particularly in arid and semi-arid regions, because of their low competitiveness for

production of wood and NTFPs, as well as PES schemes like REDD.

- New PES mechanisms, particularly REDD, have a major potential in providing financing for forest conservation, but there is uncertainty about the funding flows, and their co-benefits (other aspects of SFM) are unclear.
- PES schemes will not cover necessary upstream investment in capacity building, implementation of policy reform, strengthening of governance, market creation for environmental services, etc., and their potential is also constrained by the principle of payment upon performance.
- The upstream investment in policy reforms, capacity building, and other national measures of the NLBI appears grossly insufficient.
- Although numerous sources exist for education and forest conservation, accessing them is often constrained by eligibility criteria and procedural issues, which act as barriers, particularly for forest communities, smallholders, and local NGOs and community-based organisations.

Box 5.1 attempts to summarise what activities are needed to achieve sustained financing of forest management for environmental services and various forest products and services. The long-term scenario here is that these two main income-earning sources would be able to ensure that SFM becomes gradually largely self-financing.

To achieve this goal, new instruments require substantial initial upfront investment to develop and pilot suitable modalities in specific country conditions. This typically involves analytical work, organisation of stakeholder participation and engagement, planning, and building up necessary information systems and associated monitoring and verification systems, as well as various capacity-building activities. Some instruments (like REDD) and some countries are likely to benefit from external support in this field, but not to an extent required by countries to implement SFM (cf. section 3.2.4).

Targeted actions to build up and implement PES systems need to be complemented by mainstreamed upfront investments that cover the broader needs of achieving SFM. They involve implementation of necessary policy reforms; institutional strengthening; land-use zoning and planning; strengthening of forest land tenure; improvement of forest governance; and investments in restoration of degraded lands, infrastructure, scaled-up capacity building,

education, training and extension, research, etc. Substantial new investments in areas that are central to SFM implementation (including new instruments like REDD) include (for example) the following:

- (i) Implementation of measures to shift agribusiness companies and landowners away from clearing of rain forests towards planting on non-forest lands, including improvement of agricultural productivity
- (ii) SFM-based production of timber and non-timber forest products that will create sustainable livelihood opportunities for forest-adjacent, low-income rural families who currently depend on subsistence agriculture and income from illegal logging
- (iii) Establishment and effective implementation of adequate forest ownership/use rights for communities, smallholders, and forest dwellers, including those living in protected areas
- (iv) Land-use zoning and planning in forest areas and respective assessment and monitoring systems
- (v) Complementary investments in non-forest sector programmes (agriculture, transportation, mining, energy, etc.) to ensure inclusion of specific provisions for forest protection
- (vi) Building institutional, legal, and technical capacities of governments and private and communal forest stakeholders to effectively protect and manage forests, as well as to undertake strategic and management planning and control of their forest resources
- (vii) Improving forest governance and forest sector transparency and control (e.g., adjustment of legal framework, forest inventory, information and monitoring systems, log tracking systems, certification, supervision, and control) and strengthening of institutional, legal, and technical capacities of governments and other forest stakeholders
- (viii) Restoration of degraded forest ecosystems and establishment of timber/pulpwood plantations for carbon sequestration, wood production, and conservation, including by engaging local communities and smallholders
- (ix) Improvement and restructuring of forest-based industries to support efficient production and procurement of sustainably produced raw materials, engagement of farm forest owners and other smallholders through

Sustained Financing of Sustainable Forest Management

Initial upfront investment	Mainstreamed upfront investment	Sustained financing
<ol style="list-style-type: none"> 1. Analytical work (DD drivers, barriers to SFM, PES market potential, etc.) 2. Stakeholder participation and engagement 3. Planning (nfp, specific national strategies such as REDD, bioenergy, forest biodiversity) 4. Information base (resource assessment, baselines, reference scenarios) 5. Monitoring and verification system design 6. Safeguards and SFM guidelines development 7. Initial capacity building 8. Programme and project design 	<ol style="list-style-type: none"> 1. Implementation of policy reforms (incl. cross-sectoral impacts on forests) 2. Restructuring of institutions 3. Land-use zoning, planning, and monitoring of land-use change 4. Strengthening of forest land tenure (demarcation, titling) 5. Strengthening of law enforcement 6. Restoration of degraded lands and forests 7. Strengthening of stakeholder constituencies (smallholders, forest communities, civil society, private sector) 8. Infrastructure development 9. Forest protection (fire, pests, diseases, etc.) 10. Education, training, and extension <ul style="list-style-type: none"> - smallholders, communities, SMEs - forest managers 11. Research and innovation (silviculture, harvesting, utilisation) 12. Market-based and other voluntary instruments and implementation of SFM by smallholders, community forests, SMEs, etc. 14. Company-community/smallholder partnerships 15. Implementation of monitoring and verification systems 	<p>Forest products and services</p> <ol style="list-style-type: none"> 1. Timber 2. Non-timber forest products 3. Ecotourism 4. Other services <p>PES schemes</p> <ol style="list-style-type: none"> 1. REDD payments 2. Sink creation payments (afforestation, reforestation, forest management) 3. Biodiversity offsets 4. Landscape offsets 5. Watershed conservation offsets 6. Bundled services

Source: Author.

- company/community/smallholder partnerships, and transfer of technology
- (x) Rural development, social services, infrastructure, and administration and management skills of forest communities
 - (xi) Development of innovations and research to improve knowledge on SFM for protection of forest carbon stocks, carbon sequestration, and other forest products and services
 - (xii) Development and implementation of market-based and other voluntary mechanisms for payments for environmental services, including monitoring and verification systems
 - (xiii) Protection of forests against fires, pests and diseases, invasive alien species, and other external threats

To create on-the-ground change, these measures require thorough consultations and dialogue with all the forest stakeholders, including indigenous and

other forest-dependent peoples, and significant resources for capacity building.

In regard to the government's involvement, all these activities are in principle covered by the NLBI. Adequate resources are not, however, presently adequately mobilised for countries to implement such mainstreamed upfront investment for SFM. It is apparent that a combination of financing instruments will be needed to cover the country needs, including grants, loans, and other instruments, because it is unrealistic to assume that grant financing from bilateral ODA will be available in required quantities to cover all the needs. However, borrowing is not an option for many countries because of their other pressing national priorities. Traditional ODA will continue to play an important role, but it is likely to focus on capacity building and various catalytic activities, also in the future. Therefore, bilateral ODA cannot be expected to finance mainstreamed upfront investment on a large scale.



CHAPTER SIX

Governance Aspects of International Programmes and Financing Arrangements

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The purpose of this section is to summarise (i) the concepts and principles of governance and (ii) governance arrangements in selected international financial mechanisms¹ to provide background information for the consideration of eventual new international arrangements for financial support to the implementation of the NLBI.

6.1 CONCEPTS AND PRINCIPLES

Governance can be defined as the structures, functions, processes, and organisational traditions that have been put in place within the context of a programme's authorising environment 'to ensure that the [programme] is run in such a way that it achieves its objectives in an effective and transparent manner' (World Bank/IEG 2007). A board or other decision-making body has to ensure that the mission of an organisation or programme is accom-

plished. Governance determines how power is exercised, how decisions are made, how stakeholders are included, and how decision makers are held accountable. Governance can also be viewed as the set of rules and procedures that enable an organisation to meet its objectives.

The six core functions of governance are (i) strategic direction, (ii) management oversight, (iii) organisation of stakeholder participation, (iv) risk management, (v) conflict management, and (vi) audit and evaluation²: There are also seven generally accepted principles of good governance: (i) legitimacy, (ii) accountability, (iii) responsibility, (iv) fairness, (v) transparency, (vi) efficiency, and (vii) probity. Legitimacy and effectiveness of the governance are key concepts for an international arrangement. Effective governance requires both *efficiency* in the allocation of resources and *legitimacy* in the exercise of authority (World Bank/OED 2004; World Bank/IEG 2007).

There are two basic governance models for global programmes: shareholder model and stakeholder model. In a *shareholder model*, membership on the governing and executive bodies is limited to organisations that sponsor or pay for the programme. In the *stakeholder model*, membership is extended to other groups, such as developing countries, NGOs, and the private sector, who are potentially affected

1. Program on Forests (PROFOR); Common Fund for Commodities (CFC); the World Bank Carbon Funds (Prototype Carbon Fund [PCF], Community Development Carbon Fund [CDCF], BioCarbon Fund [BioCF], Umbrella Carbon Facility [UCF]; Critical Ecosystem Partnership Fund (CEPF); WB Energy Sector Management Assistance Program (ESMAP); ITTO Bali Partnership Fund (BPF); NFP Facility; UNFCCC Adaptation Fund (not yet operational); Global Crop Diversity Trust (GCDDT) (not yet operational); Global Mechanism (GM); UNEP Montreal Protocol Multilateral Fund (MPMF); UNDP Capital Development Fund; International Fund for Agricultural Development (IFAD); Global Environment Facility (GEF); and UNDP Trust Funds.

2. These core functions and the criteria for assessing the performance of governing bodies are adapted from the *OECD Principles of Corporate Governance* (2004).

by the programme and who therefore have a stake in its effective functioning. Both theory and practice support the view that a shareholder model of corporate governance may promote efficiency at some cost to legitimacy and that a stakeholder model, while increasing legitimacy, may face collective action problems when the number of participants is large and the cost of organising diverse interests to pursue a common goal is high relative to the expected benefit (World Bank/OED 2004). In general (and particularly in the forestry sector), there appears to be an on-going shift in more recent arrangements towards the stakeholder model to improve relevance, ownership, fairness, and accountability, but it is often difficult to balance legitimacy and efficiency.

6.2 FUNCTIONS AND STRUCTURES

Typical features of governance arrangements in the 16 global programmes reviewed include the following:

- Governing council that is composed of only donors (e.g., PROFOR, CEPF, ESMAP, Global Crop Diversity Trust) or both donors and recipients (e.g., GEF, ITTO's BPF, CFC, MPMF)
- Consultative group (e.g., ESMAP; ITTO has two groups: one with the private sector and the other with the civil society) that tends to have different roles in different organisations
- Technical advisory group or steering committee (e.g., CFC, ESMAP, NFP Facility, CDF, IFAD) that can have similar advisory tasks as the consultative group (Such a group can have a strong role and may even lead to micro-management of the programme [e.g., ESMAP].)
- Expert panels for appraisal of project funding proposals or for other tasks (e.g., ITTO, CFC)
- Management/executive board or committee that is included in many programmes (e.g., Global Crop Diversity Trust, MPMF)
- Secretariat with a Chief Executive Officer that is also a common element (e.g., ITTO, GEF, MPMF, CDF, IFAD)

The tasks and responsibilities of the governing council appear to vary. One reason for different arrangements appears to be whether an executive board exists or not. Many programmes have voting rules, but they have never (e.g., MPMF) or seldom

(e.g., ITTO) been used. Formal financing decisions are often made by the council, but the decisive appraisal work (including recommendations for funding) is carried out by advisory groups/committees or expert panels. Financing decisions depend also on whether earmarking is practised (e.g., ITTO), and sometimes earmarking may not be formal, but individual donor influence can still be strong. The experience suggests that earmarking at project level tends to lead to micro-management by donors, which is far from optimum for a programme as a whole. On the other hand, earmarking has contributed to the donors' willingness to provide voluntary contributions.

Formal procedures to make financing decisions in the governing council are often a constraint and tend to create delays in the project cycle. Agility can be ensured by assigning decision-making responsibility to the executive director, to a board of directors, or by correspondence (applying the no-objection principle).

Stakeholders are represented in the governance of many arrangements, particularly in the consultative or advisory groups, but in the governing council only in few cases (e.g., Global Crop Diversity Trust). The quality and tasks of advisory bodies tend to vary considerably from advising on purely technical aspects to strategic and policy issues. Some advisory bodies are reactive (providing advice only when requested), and others are proactive (providing advice when the group sees a need for it).

The World Bank's two new climate investment funds (SCF and CTF) will provide equal representation to developing and developed nations through a Trust Fund Committee, which will work by consensus and include eight representatives from donor countries and recipient countries, respectively. The fund will manage additional resources to those already committed to other World Bank-managed funds; namely, the Global Environment Facility (GEF), the Least Developed Countries Fund (LDCF), the Special Climate Change Fund (SCCF), and the Adaptation Fund. A Partnership Forum is also envisaged to meet annually as a broad-based meeting of stakeholders, including donor and eligible recipient countries, multilateral development banks, UN agencies and processes, the GEF, the Adaptation Fund, bilateral development agencies, NGOs, private sector entities, and scientific and technical experts.



CHAPTER SEVEN

Conclusions

7.1 MAIN FINDINGS¹

There is a need for substantial new and additional funding from all sources to support SFM and make the NLBI implementation effective on the ground. Although many new promising mechanisms and sources are emerging, so far there is no serious deliberation to define and develop a SFM-specific funding mechanism or instrument.

Although ODA for forests appears to have a modest increasing trend in the past few years, the gap between the needs and funding is still very wide. ODA to forests has increased only in the case of a few bilateral donors and some multilateral financing institutions. The sustainability of increased ODA is therefore not assured. To make progress to achieve GOF4 in mobilising more resources, concerted efforts are needed from both donor and recipient countries.

Because of other pressing priorities in national development, the forest sector in many developing countries will continue to face challenges in mobilising new public funding for forests. However, given the dual benefits of forests, donors and national governments should continue to support sectoral pro-

grammes and policy development in future forest financing.

Without explicit linkage with forests in poverty reduction strategies and broader national development plans, there is unlikely to be an increase in explicit demand for, and thereby supply of, ODA to forests. Contribution of forests to poverty reduction and dependency of the poor on forests need further clarification to justify allocation of ODA to forests (including budgetary support).

ODA should play a substantially stronger role in future forest financing. Increased contributions, including to sectoral aid programmes and policy development lending, would be needed in future forest financing to ensure that the financing gap is not expanding further.

The Principles of the Paris Declaration on Aid Effectiveness are not yet adequately applied to align and harmonise ODA to forests, resulting in high transaction costs for both donor agencies and recipient countries. Only national leadership to coordinate various financing sources and external initiatives can ensure adequate coordination and effectiveness of external public funding to forests.

National forest programmes provide a useful framework for donor harmonisation and in-country coordination of external financial support to forestry, but in only a small number of countries do they appear to be integrated with broader national development and poverty reduction strategies. The focus in nfp processes has been on enhancing partic-

1. There is a wealth of literature on the lessons learned on financial and other support to sustainable forest management. The seminal paper on the subject by Persson (2003) provides a good summary, and relatively few things appear to have truly changed since then.

ipatory processes, but the technical quality is often weak and lacks elements that allow ministries of finance to justify resource allocation to the sector. There is probably a need to improve implementation of the nfp concept based on the accumulated experience to strengthen the quality of analytical work in the elaboration of nfps and their financing strategies. This would clarify where the gaps are to meet the country-level priorities of SFM and implementation of the NLBI national measures for facilitating mobilisation of additional funding.

There are indications that more financing is likely to be available for those countries where there is effective demand for forest financing and where the national legal and policy framework and governance conditions enable investments by both the public and private sectors. It is indeed the national-level conditions that will largely define how much external financing will be provided to SFM and associated downstream activities.

Success in raising necessary funding for SFM from private sources will largely depend on (i) the markets for forest goods and services and how forest owners and communities and the other actors in the private sector can be made to invest in sustainable operations and (ii) whether the competitiveness of forests as a land use can be ensured against alternative uses. To achieve this on a country level, there should be a conducive policy environment for SFM, and private sector actors (including smallholders and communities) should have access to adequate funding resources.

Without establishing secure land tenure and forest use rights, it is unrealistic to assume that the private sector, local communities, and smallholders will invest in SFM. Reform processes are politically sensitive, technically complex, and resource demanding. Implementation tends to be slow (even within an adequate legislation) if the relevant administration cannot be effectively mobilised to implement the will of legislators. This has been frequently underestimated in externally funded programmes and projects to improve land tenure.

Changing the investment climate to provide enabling conditions for both private and public investment as a means to fill part of the SFM financing gap requires addressing both extra-sectoral and forest sector constraints. Addressing the former can rarely be driven by forest sector interests and needs a high-level political commitment. The key sectoral

issue in many countries is weak forest governance, which acts as a barrier for both private and public financing. There is a need to assess and monitor national forest sector investment climate to ensure systematic efforts for necessary improvements.

Market-based mechanisms have significant potential to generate financing through payments for forest environmental services, but these mechanisms cannot work effectively without a regulatory framework and the government's promotional role. They also need significant upstream investment because their payments are made upon performance. This constraint should be addressed when PES schemes are developed.

Appropriate integration of forests into the future climate-change regime and its financing instruments will be critical for substantial increase in funding volumes to forests. However, for forest carbon financing instruments to become prevalent, a number of conceptual, policy, and administrative complexities (e.g., additionality, incrementality, governance) will need to be resolved first.

Furthermore, while it is encouraging to note that some forest services, in particular climate-change mitigation, have potential to mobilise increased funding for forestry, it is important to ensure that the holistic approach of SFM, including its social, environmental, and economic objectives, are not compromised by a narrow focus on a single commodity or service of forests, such as (for example) carbon sequestration.

The recent experience on biofuels shows that (i) lack of adequate consideration of impacts on both society and environment and (ii) equity issues in the design of new financing instruments may backfire. This should be avoided in the case of REDD schemes through adequate analytical work, planning, piloting, and awareness raising to create realistic expectations.

In the design of new financing instruments for filling the existing funding gaps for SFM, there is a need to strive for simple practical solutions that can be improved over time with accumulating experience. Piloting is therefore crucial to allow adequate testing of alternative modalities. Perfection in the initial design of new instruments is often the worst enemy of success.

The main thematic bottleneck is financing of mainstream upfront investment on all aspects of SFM, while conservation and capacity building are

already covered from a variety of sources, albeit not to a required extent. Access to funding of such mainstreamed upfront investment will be critical in developing countries so that they can make progress towards a higher degree of self-financing of SFM. This 'self-financing' as an objective would be based on revenue generated for forest owners and managers from forest goods and services, including payments for global public goods generated by forests, as appropriate in local conditions.

In view of the existing and emerging financing flows, major geographic gaps appear to be in low-forest-cover countries and least developed countries. These gaps are strategically important because significant opportunities for maintenance and enhancement of global and local public goods from forests remain untapped while the ecosystems of these countries are being degraded. Development of new financing instruments should consider addressing these gaps.

Building up the necessary country capacity would also require additional investment, which the current and emerging instruments are not yet sufficiently addressing. For forest actors and other stakeholders as recipients, access to funding sources and transaction costs are crucial. The currently available funding sources have not adequately considered this because their design is usually driven by internal priorities and procedures.

There is an urgent need to improve transparency of external forest (and related) financing from all sources to developing countries. This has been long overdue and has contributed to the slow progress in reaching a consensus on options to mobilise 'new and additional' financial resources for SFM.

7.2 STRENGTHENING OF INTERNATIONAL FINANCING FOR SFM

'A voluntary global financial mechanism/portfolio approach/forest financing framework for all types of forests ... to support the implementation of sustainable forest management, the achievement of the GOFs, and the implementation of the NLBI ...' was called for in the ECOSOC resolution 2007/40. This study has shown that there exists a rapidly evolving forest-related financing architecture at the international level, which is partly specifically targeted at sustainable forest management and partly at enhancing the contribution of forests to climate-

change mitigation and conservation of biological diversity. The 'portfolio approach' for forest financing (El Lakany, Jenkins, and Richards 2007; Hoogeveen et al. 2008) therefore exists because various funding needs of developing countries for SFM are already being financed from a variety of sources. However, the currently available 'portfolio' of funding sources is inadequate for SFM because of limitations in focus, availability, accessibility, and volume of finance. Further efforts are required to better utilise the existing funding sources and mechanisms and to expand them by creating new financial instruments to fill the existing gaps.

The international-level policy environment related to new funding sources that are targeted at forests or that can support SFM is constantly changing. In spite of all existing and emerging financial instruments and sources, with their potentials and limitations, the feasibility of a new 'voluntary global financial mechanism' for SFM (as called for by the ECOSOC resolution 2007/40) will continue to be a critical political and policy question. Because the currently available funding sources can address only part of the funding needs of SFM and NLBI implementation, the international community should consider whether a specific new SFM/NLBI-targeted instrument or mechanism can be set up to increase financial resources in a systematic and predictable manner.

There are several options for new SFM-targeted funding, including those under development. One example is a broad-based Forest Investment Program along the lines being planned under the Strategic Climate Fund. It could embrace the key multilateral financing institutions and draw on sufficiently large funding flows to be channelled to SFM in developing countries through a variety of instruments, including grants, credits, guarantees, etc. It is however, noted that it is unlikely that one single funding instrument would be sufficient to fully meet the needs of SFM and NLBI implementation.

Various recent funding initiatives related to forests suggest that the tendency is towards more fragmentation, rather than consolidation. This is a cause of concern for donors, recipient countries, and their beneficiaries, as well as existing international organisations working in the financing area. There is a risk for overlapping mandates, lack of recognition of competitive advantages, confusion among potential providers of funding to new initiatives, and unhealthy competition for 'good' projects.

There is a need to harness synergies between various financing mechanisms and instruments in climate change, biodiversity, land degradation, and sustainable forest management. In view of the independent nature of various financing bodies and sources and the fact that forests are often just one of the financing windows in many cases, it is unrealistic to assume that the various components of the forest financing 'portfolio' could be forged under a single management structure. However, effective coordination is necessary at all levels, and the current cooperative arrangements should be strengthened.

On a country level, enhanced coordination would require integrating instruments such as national forest financing strategies and exchange of information, which could be arranged through appropriate arrangements led by governments. In addition, adequate country capacity should be built

up to make full use of the increasingly diversified and complex external and internal funding instruments for forests.

The world's forests are a multi-functional natural resource that, when managed sustainably, can meet the various needs of society in spatial and temporal terms (i.e., local, national, and global, as well as present and future generations). To maintain and enhance the goods and services provided by forests, international-, national-, and local-level action to implement the global commitment to SFM as expressed in the NLBI is paramount. It is equally important that appropriate means of implementation, especially financial resources, for sustainable forest management and thus for the NLBI implementation are made available. Further clarity on how this can be achieved is urgently needed to make progress on the ground.



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Appendices

APPENDIX I.1 ACTION AREAS OF THE NLBI NATIONAL MEASURES

NLBI national measures	Action areas (examples of possible activities)
(a) Develop, implement, publish and, as necessary, update national forest programmes or other strategies for sustainable forest management which identify actions needed and contain measures, policies or specific goals, taking into account the relevant proposals for action of the Intergovernmental Panel on Forests/ Intergovernmental Forum on Forests and resolutions of the United Nations Forum on Forests	<ol style="list-style-type: none"> 1. Development of nfps or similar strategies (analysis and formulation) 2. Implementation of nfps, specific programmes and activities (policy adjustment, programme and project implementation, dissemination) 3. Monitoring and evaluation 4. Periodic updating of nfp and other strategies
(b) Consider the seven thematic elements of sustainable forest management, which are drawn from the criteria identified by existing criteria and indicators processes, as a reference framework for sustainable forest management and, in this context, identify, as appropriate, specific environmental and other forest-related aspects within those elements for consideration as criteria and indicators for sustainable forest management	<ol style="list-style-type: none"> 1. Development of national/sub-national/local C&I (e.g., analysis, stakeholder consultation, pilot testing, etc.)
(c) Promote the use of management tools to assess the impact on the environment of projects that may significantly affect forests, and promote good environmental practices for such projects	<ol style="list-style-type: none"> 1. Promotion through (for example) awareness raising, training, regulatory adjustment the use of tools for environmental impact assessment of projects affecting forestry 2. Promotion of good environmental practices of forestry and other projects impacting forests (e.g., safeguard development and adoption, dissemination, training, regulatory, and voluntary measures)
(d) Develop and implement policies that encourage the sustainable management of forests to provide a wide range of goods and services, and that also contribute to poverty reduction and the development of rural communities	<ol style="list-style-type: none"> 1. Development of policies supporting SFM (e.g., analytical work, stakeholder consultation, etc.) 2. Implementation of policies supporting SFM (e.g., adjustment of regulation, taxation, incentives dissemination and training monitoring and evaluation)
(e) Promote efficient production and processing of forest products, with a view, inter alia, to reducing waste and enhancing recycling	<ol style="list-style-type: none"> 1. Promotion of efficient production and processing (e.g., identification of improvement possibilities, dissemination of information on alternative technologies, training, extension to SMEs, adjustment of regulations)

NLBI national measures	Action areas (examples of possible activities)
(f) Support the protection and use of traditional forest-related knowledge and practices in sustainable forest management with the approval and involvement of the holders of such knowledge, and promote fair and equitable sharing of benefits from their utilization, according to national legislation and relevant international agreements	<ol style="list-style-type: none"> 1. Protection of TFRK through IPRs and other measures (e.g., analytical studies and dissemination, adjustment of legal framework) 2. Promotion of the use of TFRK in SFM (e.g., adjustment or guidelines for SFM, dissemination, training) 3. Promotion of fair sharing of benefits from TFRK (e.g., adjustment of legal framework, promotion of voluntary measures such as partnership agreements, improvement of transparency on benefits and their sharing)
(g) Further develop and implement criteria and indicators for sustainable forest management that are consistent with national priorities and conditions	<ol style="list-style-type: none"> 1. Development of national/sub-national/local C&I 2. Implementation of C&I (e.g., adjustment of forest management standards, strengthening of information systems for monitoring and reporting at different levels of implementation)
(h) Create enabling environments to encourage private sector investment, as well as investment by and involvement of local and indigenous communities, other forest users and forest owners and other relevant stake-holders, in sustainable forest management, through a framework of policies, incentives and regulations	<ol style="list-style-type: none"> 1. Identification and assessment of options for improvement of the policy/economic/legal framework and incentives for promotion of investment in SFM (e.g., analytical work on barriers in investment climate, stakeholder consultation) 2. Revision of policy and legal framework for involvement of local and indigenous communities, forest owners, and other forest users and other stakeholders in SFM (e.g., adjustment of rules, regulations, administrative procedures, supervision and control systems, incentives, taxation)
(i) Develop financing strategies that outline the short-, medium- and long-term financial planning for achieving sustainable forest management, taking into account domestic, private sector and foreign funding sources;	<ol style="list-style-type: none"> 1. Development of financing strategies to achieve SFM (e.g., identification of needs for financing and potential funding sources, analysis of barriers to financing of SFM, stakeholder consultations, design of financing instruments and planning of their implementation and monitoring, engagement of the banking sector)
(j) Encourage recognition of the range of values derived from goods and services provided by all types of forests and trees outside forests, as well as ways to reflect such values in the marketplace, consistent with relevant national legislation and policies	<ol style="list-style-type: none"> 1. Valuation of forest goods and services (e.g., assessment of financial, economic, and non-monetary values of forest goods and services, analytical work on market and policy failures, identification of market and other mechanisms for appropriate valuation/compensation of forest goods and services) 2. Creation of markets for forest goods and services (e.g., awareness raising on forest values and needs for their compensation, adjustment of regulatory and institutional framework for markets for forest goods and services, dissemination, education and training, and support to market promotion)
(k) Identify and implement measures to enhance cooperation and cross-sectional policy and programme coordination among sectors affecting and affected by forest policies and management, with a view to integrating the forest sector into national decision-making processes and promoting sustainable forest management, including by addressing the underlying causes of deforestation and forest degradation, and by promoting forest conservation	<ol style="list-style-type: none"> 1. Strengthening of cooperation and cross-sectoral coordination to integrate the forest sector to national decision making (e.g., analytical work on effectiveness and constraints of cross-sectoral cooperation and coordination arrangements and on potential contribution of the forest sector and SFM to the achievement of national development objectives; identification of extra-sectoral impacts on forests and their underlying causes and consequences, awareness raising among decision makers on the impacts and needs for remedial action) 2. Strengthening of cooperation and cross-sectional coordination to promote SFM (e.g., establishment of institutional mechanisms for cross-sectoral cooperation and coordination for SFM promotion, effective participation of forest agencies and related institutions in relevant other sectors' planning, programme implementation and monitoring as they pertain to forests)

NLBI national measures	Action areas (examples of possible activities)
(l) Integrate national forest programmes, or other strategies for sustainable forest management, as referred to in paragraph 6 (a) above, into national strategies for sustainable development, relevant national action plans and poverty reduction strategies	1. Integration of nfps into national development strategies (e.g., analytical work on nfp's contribution to the national development objectives and priorities, including poverty reduction, communication and awareness raising, participation of forest authorities in national planning processes)
(m) Establish or strengthen partnerships, including public-private partnerships, and joint programmes with stakeholders to advance implementation of sustainable forest management	1. Establishment and promotion of public-private partnerships and joint stakeholder programmes (e.g., identification and analysis of modalities for public-private partnerships and joint stakeholder programmes, adjustment of the legal and policy framework for their effective implementation, awareness raising, training of participants, improvement of market transparency)
(n) Review and, as needed, improve forest-related legislation, strengthen forest law enforcement, and promote good governance at all levels in order to support sustainable forest management, to create an enabling environment for forest investment and to combat and eradicate illegal practices according to national legislation, in the forest and other related sectors	<ol style="list-style-type: none"> 1. Review and improvement of forest legislation (e.g., detailed analysis of consistency and adequacy of the forest and related legislation in views of SFM, identification of necessary improvements, stakeholder consultation, adjustment of legislation) 2. Strengthening of law enforcement (e.g., analysis on the effectiveness, weakness, and constraints in the law enforcement system; strengthening of the supervision and control system; adjustment of institutional mandates, structures, and incentive systems; engagement of forest owners, managers, and other stakeholders in monitoring and control; involvement of other third parties) 3. Promoting of good governance (e.g., improvement of transparency on government agencies' decision making related to forests, collection of forest taxes and their use, independent reviews/evaluations on forest-related institutions, stakeholder consultations, awareness raising)
(o) Analyse the causes of and address threats to forest health and vitality from natural disasters and human activities, including threats from fire, pollution, pests, disease and invasive alien species	<ol style="list-style-type: none"> 1. Planning of protected areas and other conservation measures (e.g., assessment of the status of biodiversity in existing protected areas and their representativeness, as well as conservation status outside protected areas; elaboration of national, sub-national, and local strategic plans for ensuring maintenance of forest biodiversity) 2. Establishment of additional protected areas and other conservation areas (e.g., stakeholder consultation, demarcation, gazettelement, management planning, establishment of infrastructure, organization of protection) 3. Development and implementation of other conservation measures and mechanisms for forests outside protected areas (e.g., adjustment of forest management guidelines, safeguards, monitoring and control; incentives for forest owners and communities, forest managers, and other stakeholders)
(p) Create, develop or expand, and maintain networks of protected forest areas, taking into account the importance of conserving representative forests, by means of a range of conservation mechanisms, applied within and outside protected forest areas	<ol style="list-style-type: none"> 1. Planning of protected areas and other conservation measures (e.g., assessment of the status of biodiversity in existing protected areas and their representativeness, as well as conservation status outside protected areas; elaboration of national, sub-national, and local strategic plans for ensuring maintenance of forest biodiversity) 2. Establishment of additional protected areas and other conservation areas (e.g., stakeholder consultation, demarcation, gazettelement, management planning, establishment of infrastructure, organization of protection) 3. Development and implementation of other conservation measures and mechanisms for forests outside protected areas (e.g., adjustment of forest management guidelines, safeguards, monitoring and control; incentives for forest owners and communities, forest managers, and other stakeholders)

NLBI national measures	Action areas (examples of possible activities)
(q) Assess the conditions and management effectiveness of existing protected forest areas with a view to identifying improvements needed	1. Assessment of effectiveness of existing protected forest areas (e.g., development and application of specific tools for assessment and monitoring of effectiveness of protected area management, identification of needs for improvement measures and their implementation)
(r) Strengthen the contribution of science and research in advancing sustainable forest management by incorporating scientific expertise into forest policies and programmes	1. Incorporation of scientific results and expertise in policies and programmes (e.g., analysis of needs for scientific results and expertise in policy and planning processes and forest programme implementation, engagement of research institutions and scientists in policy design and evaluation, adjustment of research programmes to meet national strategic needs and needs of forest owners and communities and forest managers, independent reviews on the contribution of national research to SFM)
(s) Promote the development and application of scientific and technological innovations, including those that can be used by forest owners and local and indigenous communities to advance sustainable forest management	1. Promotion of scientific and technological innovations for SFM (e.g., monitoring of international scientific and technological innovations; design and implementation of technology development and innovation programmes with the participation of stakeholders; validation and dissemination of innovations through communication, training, extension, and other appropriate means)
(t) Promote and strengthen public understanding of the importance of and the benefits provided by forests and sustainable forest management, including through public awareness programmes and education	1. Promotion of public understanding of the importance of forests (e.g., preparation and dissemination of communication materials; engagement of policy makers, leaders, and media in forest communication) 2. Public awareness programmes (e.g., design of strategies and programmes for communication and awareness raising on forest issues)
(u) Promote and encourage access to formal and informal education, extension and training programmes on the implementation of sustainable forest management	1. Promotion of access to education and extension (e.g., arrange forest education and training facilities at vocational, technical, and professional levels, including adequate training programmes and qualified trainers, monitoring and evaluation of education and training for continuous improvement, communication on the availability of available education and training)
(v) Support education, training and extension programmes involving local and indigenous communities, forest workers and forest owners, in order to develop resource management approaches that will reduce the pressure on forests, particularly fragile ecosystems	1. Support to education, training, and extension for local and indigenous communities, forest workers, and forest owners (arrange support extension services to forest owners and communities, SMEs, and other stakeholders; monitoring and evaluation; continuous further training of extension agents; support participation of disadvantaged groups in forest training)
(w) Promote active and effective participation by major groups, local communities, forest owners and other relevant stakeholders in the development, implementation and assessment of forest-related national policies, measures and programmes	1. Promotion of stakeholders' participation in policy processes and programmes (e.g., stakeholder analysis; establishment of rules and procedures for major groups' participation in policy processes, programme design, implementation, and monitoring; establishment of grievance procedures; provision of access to relevant information)
(x) Encourage the private sector, civil society organizations and forest owners to develop, promote and implement in a transparent manner voluntary instruments, such as voluntary certification systems or other appropriate mechanisms, to develop and promote forest products from sustainably managed forests harvested according to domestic legislation, and to improve market transparency	1. Support development and implementation of certification systems and other mechanisms (e.g., support development of voluntary SFM standards and voluntary codes of conduct, establishment of certification and accreditation services, training of auditors and forest managers; implement public procurement policies for legally and sustainably produced forest products)

NLBI national measures	Action areas (examples of possible activities)
<p>(y) Enhance access by households, small-scale forest owners, forest dependent local and indigenous communities, living in and outside forest areas, to forest resources and relevant markets in order to support livelihoods and income diversification from forest management, consistent with sustainable forest management</p>	<ol style="list-style-type: none"> 1. Facilitation of access to forest resources (e.g., analytical work on constraints and opportunities to ensure access to forest resources; adjustment of the policy and legal framework; awareness raising among forest owners, communities, and households on their rights; refresher training of forest administration staff on forest stakeholders' rights and their implications; establishment of demonstration areas; monitoring and evaluation; broad-based communication on rights) 2. Facilitation of market access (e.g., analytical work on barriers to market access by forest communities and forest owners, improvement of market transparency, adjustment of regulation, development of quality standards and their implementation, market promotion programmes and projects)

Source: Author's elaboration.

APPENDIX 2.1

OCCURRENCE OF FORESTS IN PRSP AND CAS

Country	A description of the links between poverty and forests, and that between forests and growth	A description of the forest sector problems, challenges, and issues	Policy and programme responses to address the challenges identified in the sector	A coherent strategy to implement the policy reforms and programmes, including financing options	Significant mention of forests and links to rural development and poverty reduction	Discussion of an Action Plan for the sector	Mention of forest sector investments in CAS programme or priority matrix
Benin	x	x	x	–	x	x	–
Burkina Faso	x	–	–	–	x	x	–
Cameroon	x	x	x	–	x	x	–
Central African Republic							
(I-PRSP) (No CAS)	x	–	–	–			
Chad	x	x	x	–	x	–	–
Côte d'Ivoire	–	–	x	–	x	x	x
Ethiopia	–	–	–	–	x	–	–
Ghana	x	x	x	–	x	x	x
Guinea	x	x	x	–	x	–	–
Kenya (I-PRSP)	–	–	–	–	–	–	–
Madagascar	x	x	x	x	x	–	x
Malawi	–	–	–	–	–	–	–
Mali	x	x	x	x	x	x	–
Mauritania	x	–	–	–	x	–	–
Niger	x	x	–	–	–	–	–
Nigeria	–	–	–	–	–	–	–
Rwanda	x	x	–	–	x	x	–
Senegal	x	x	x	–	–	–	–
Sierra Leone	–	–	–	–	–	–	–
South Africa (no PRSP)					x	–	–
Tanzania	x	x	x	x	–	–	–
Uganda	–	–	–	–	x	–	–
Zambia	x	x	x	x	–	–	–
Zimbabwe (no PRSP)					x	x	–

Country	A description of the links between poverty and forests, and that between forests and growth	A description of the forest sector problems, challenges, and issues	Policy and programme responses to address the challenges identified in the sector	A coherent strategy to implement the policy reforms and programmes, including financing options	Significant mention of forests and links to rural development and poverty reduction	Discussion of an Action Plan for the sector	Mention of forest sector investments in CAS programme or priority matrix
Armenia	x	x	x	x	x	x	x
Azerbaijan	x	x	–	–	x	–	–
Bosnia-Herzegovina	x	x	x	x	–	x	–
Bulgaria (no PRSP)					x	x	x
Georgia	x	–	–	–	x	x	x
Kazakhstan (no PRSP)					–	–	–
Kyrgyz Republic	x	–	–	–	–	–	–
Moldova	–	x	x	–	–	–	–
Romania (no PRSP)					x	x	x
Russian Federation (no PRSP)					x	x	x
Tajikistan	–	–	–	–	x	–	–
Uzbekistan (I-PRSP)	–	–	–	–			
Cambodia	x	x	x	x	x	x	x
China (no PRSP)					x	x	x
Indonesia (I-PRSP)	–	–	–	–	x	x	x
Lao PDR	x	–	–	–	x	x	x
Mongolia	x	x	x	–	x	x	x
Timor-Leste	–	x	x	x			
Vietnam	–	–	x	x	x	x	–

Country	A description of the links between poverty and forests, and that between forests and growth	A description of the forest sector problems, challenges, and issues	Policy and programme responses to address the challenges identified in the sector	A coherent strategy to implement the policy reforms and programmes, including financing options	Significant mention of forests and links to rural development and poverty reduction	Discussion of an Action Plan for the sector	Mention of forest sector investments in CAS programme or priority matrix
Bangladesh (CAS in 2001)	x	x	x	x	–	–	–
Bhutan	–	–	–	–	x	–	–
India (no PRSP)					–	–	–
Nepal	x	x	x	x	x	–	–
Pakistan	–	–	–	–	–	–	–
Sri Lanka	x	x	x	x	–	–	–
Argentina (no PRSP)					x	–	–
Brazil (no PRSP)					x	x	x
Ecuador (no PRSP)					–	x	–
Guyana	x	x	x	–	–	–	x
Nicaragua	x	x	x	–	x	x	x
Peru (no PRSP)					–	–	–

Source: Contreras-Hermosilla and Simula (2007).

X = Discussed.

– = No mention.

APPENDIX 3.1

BILATERAL AND MULTILATERAL FINANCING TO FORESTS BY SOURCE 2000–2007

Sources	US\$1,000 at 2006 exchange rates and prices				
	2000–2002, US\$1,000/yr	Share (%), 2000–2002	2005–2007, US\$1,000/yr	Share (%), 2005–2007	Change (%)
Bilateral					
Australia (1)	14,199	1.48	9,804	0.89	-30.96
Austria (2)	1,969	0.21	969	0.09	-50.80
Belgium (3)	1,930	0.20	1,982	0.18	2.69
Canada (4)	14,895	1.55	9,303	0.84	-37.55
Denmark (5)	19,794	2.06	6,974	0.63	-64.77
European Commission (25)	101,233	10.55	115,662	10.48	14.25
Finland (6)	20,306	2.12	12,707	1.15	-37.42
France (7)	21,291	2.22	19,337	1.75	-9.17
Germany (8)	130,914	13.65	126,007	11.42	-3.75
Greece (9)	81	0.01	3	0.00	-96.69
Ireland (10)	108	0.01	4	0.00	-96.04
Italy (11)	415	0.04	n.a.	0.00	-100.00
Japan (12)	328,989	34.29	530,502	48.08	61.25
Luxembourg (13)	n.a.	0.00	1,233	0.11	
Netherlands (14)	111,724	11.65	88,479	8.02	-20.81
New Zealand (15)	3,050	0.32	5,515	0.50	80.82
Norway (16)	10,225	1.07	5,116	0.46	-49.97
Portugal (17)	452	0.05	1,097	0.10	142.62
Spain (18)	1,927	0.20	1,282	0.12	-33.48
Sweden (19)	10,486	1.09	10,485	0.95	-0.01
Switzerland (20)	30,222	3.15	30,634	2.78	1.36
United Kingdom (21)	39,226	4.09	28,731	2.60	-26.76
United States (22)	95,902	10.00	97,601	8.85	1.77
Subtotal	959,339	100.00	1,103,425	100.00	15.02
Multilateral					
AfDB (23)	35,793	10.68	72,745	9.02	103.24
AsDB (24)	6,883	2.05	12,383	1.54	79.90
GEF (26)	104,100	31.07	109,450	13.57	5.14
IDB (27)	2,114	0.63	9,115	1.13	331.28
ITTO (28)	16,612	4.96	16,317	2.02	-1.78
IFC (29)	78,000	23.28	324,000	40.16	315.38
WB (30)	91,500	27.31	262,667	32.56	187.07
Subtotal	335,002	100.00	806,677	100.00	140.80
Grand total	1,294,341		1,910,102		47.57
Bilateral share	0.7412		0.5777		

(Data sources on next page)

Data sources:

1	2000 data from OECD/DAC. 2001–2006 data from AusAID. The upper year of fiscal year is used.
2	Data from Federal Ministry of Agriculture, Forestry, Environment, and Water Management, Austria.
3	Data from OECD/DAC.
4	2000 data from OECD/DAC. The upper year of the fiscal year is used.
5	Data from Danish International Development Agency.
6	Data from Ministry of Foreign Affairs.
7	According to the Ministry of Foreign Affairs, the annual average ODA during the period 2003–2007 is 15.4 million euros (€) per year. The same amount is used for the period 2000–2002 in the absence of a better estimate.
8	Data from the Federal Ministry for Economic Cooperation and Development (BMZ). The total was compiled based on project-level commitments. The project-level total commitment was divided by the number of years of the project period.
9	Data from OECD/DAC.
10	Data from OECD/DAC.
11	Data from OECD/DAC.
12	2000 data from OECD/DAC. 2001–2006 data from the Ministry of Foreign Affairs. Voluntary contributions to ITTO in US dollars are excluded.
13	Data from OECD/DAC.
14	Data from the Ministry of Foreign Affairs of the Netherlands, Environment and Water Department, Natural Resources and Ecosystem Management Division (DMW/NE)
15	Data from NZAID.
16	Data from Ministry of Foreign Affairs, Norway. Multilateral aid included.
17	Data from the Ministry of Foreign Affairs through the Ministry of Agriculture.
18	Data from OECD/DAC.
19	Data from the Swedish International Development Agency (SIDA) (1,000 SEK).
20	2000–2005 data from Direktion für Entwicklung und Zusammenarbeit, DEZA. 2006 data from OECD/DAC. Only 2005 data are used in the annual average for 2005–2007 (CHF million). Data does not include voluntary contributions to ITTO and some smaller bilateral projects funded by the State Secretariat of Economic Cooperation, SECO.
21	Data from DFID.
22	USAID's forestry fundings. Other US funding agencies are not included because there is no complete information on their fundings in the period 2000–2006. Debt-for-nature programmes estimated at about US\$9 million annually for tropical forest conservation.
23	Data from Moussa (2007) available at http://www.itto.or.jp/live/Live_Server/3280/ADB_PPT.ppt (1,000 UA: Unit of Account).
24	Data from AsDB project database 2000–2007.
25	2002–2007 data from EuropeAid, EC (€1,000).
26	Data from GEF (2005). Annual commitments were calculated by dividing the total commitments of the commitment period by the number of years of the commitment period.
27	For on-going projects, the amount disbursed up to 30 June 2008 was obtained by dividing the total by the number of years between the approval date and the date of updating the database (30 June 2008). For completed projects, the amount disbursed was obtained by dividing the total by the number of years.
28	Data from ITTO.
29	Data from IFC.
30	Data from the World Bank. FY July to June is recorded as commitment for the upper year.

**APPENDIX 5.1
POTENTIAL OF CLIMATE-CHANGE MITIGATION MEASURES
OF FORESTRY ACTIVITIES IN NON-ANNEX I COUNTRIES**

Region	Reduced deforestation	Forest management	Afforestation	Total	Share (%)
	million t CO ₂ /yr in 2030				
Central and South America	1,845	550	750	3,145	28
Africa	1,160	100	665	1,925	17
Non-Annex I East Asia	110	1,200	605	1,915	17
Other Asia/Middle East	670	960	745	2,375	21
Middle East	30	45	60	135	1
Countries in transition	85	1,055	545	1,685	16
Total Non-Annex I	3,900	3,910	3,370	11,180	100
Share (%)	35	35	1,30	100	
Non-Annex I share of the global potential ^a (%)	99	68	83	81	

Source: IPCC 2007.

a Potential at cost equal to, or less than, US\$100/t CO₂.

**APPENDIX 5.2
AREA OF AVOIDED DEFORESTATION AND FOREST DEGRADATION BY REGION (1,000 HA)**

Deforestation driver	East & South Africa	North Africa	West & Central Africa	Africa total	Asia- Pacific	Central America & Mexico	South America	Latin America	Other countries	Total
Commercial agriculture										
- Commercial crops	340	150	270	760	770	60	850	910	130	1,800
- Cattle ranching	170	290	70	530	30	110	850	960	90	1,580
Subtotal	510	440	340	1,290	800	170	1,700	1,870	220	3,380
Subsistence farming										
- Small-scale shifting cultivation	850	290	680	1,820	1,280	250	1,700	1,950	430	4,200
- Fuelwood and NTFP	90	120	70	280	160	60	210	270	40	590
Subtotal	940	410	750	2,100	1,440	310	1,910	2,220	470	4,790
Wood extraction										
- Commercial crops	90	30	200	320	800	60	510	570	130	1,020
- Fuelwood/charcoal	170	100	70	340	160	30	130	160	40	540
Subtotal	260	130	270	660	960	90	640	730	170	1,560
Total	1,710	980	1,360	4,050	3,200	570	4,250	4,820	860	9,730

Source: Blaser and Robledo (2007).

APPENDIX 5.3**LOWEST INVESTMENT COST REQUIRED TO COMPENSATE THE OPPORTUNITY COSTS OF DEFORESTATION AND FORESTS DEGRADATION (US\$ MILLIONS/YR)**

Deforestation source	East & South Africa	North Africa	West & Central Africa	Africa total	Asia-Pacific	Central America & Mexico	South America	Latin America	Total
Commercial agriculture									
- Commercial crops	567.8	226.4	578.0	1,372.2	1,926.0	104.5	2,040.0	2,144.5	5,765.2
- Cattle ranching	56.1	97.0	22.4	175.5	10.6	49.5	527.0	576.5	801.3
Subtotal	623.9	323.4	600.4	1,547.7	1,936.6	154.0	2,567.0	2,721.0	6,566.5
Subsistence farming									
- Small-scale shifting cultivation	297.5	102.9	306.0	706.4	674.1	86.6	595.0	681.6	2,148.1
- Fuelwood and NTFP	21.2	32.9	17.0	71.1	48.2	13.8	53.1	66.9	197.0
Subtotal	318.7	135.8	323.0	777.5	722.3	100.4	648.1	748.5	2,345.1
Wood extraction									
- Commercial crops	54.4	11.8	244.8	311.0	2,194.8	52.8	499.8	552.6	3,187.4
- Fuelwood/charcoal	27.2	6.4	6.8	40.4	16.0	2.6	14.0	16.6	85.9
Subtotal	81.6	18.2	251.6	351.4	2,210.8	55.4	513.8	569.2	3,273.3
Total	1,024.2	477.4	1,175.0	2,676.6	4,869.7	309.8	3,728.9	4,038.7	12,184.9

Source: Blaser and Robledo (2007).

In April 2008, the eighth session of the United Nations Forum on Forests (UNFF) will consider 'means of implementation for sustainable forest management'. Funding to effectively implement the non-legally binding instrument (NLBI) on all types of forests will be a critical consideration.

Although overseas development assistance for forests appears to have modestly increased in the past few years, and although many new promising mechanisms and sources are emerging, analysis reveals that the gap between the need and existing funding for sustainable forest management is still very wide—there is a need for substantial new and additional

funding from all sources to support sustainable forest management and make implementation of the NLBI effective on the ground.

This study provides systematic and objective analysis of the funding sources and gaps with regard to the NLBI. The study focuses on external sources of funding and looks at support to the forestry sector as well as support to forest conservation.

In exploring the nature of the funding gaps, and some of the constraints to effective financing (such as governance aspects or fragmented support) the analysis points to ways in which financing for sustainable forest management can be strengthened.



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