UNFF – UNITED NATIONS FORUM ON FORESTS

THE UNITED NATIONS

BRIEF STUDY ON FUNDING AND FINANCE FOR FORESTRY AND FOREST-BASED SECTOR

- FINAL REPORT -

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TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

LIST OF ACRONYMS

%	Percentage
€	Europe Euro
ADB	Asian Development Bank
AfDB	African Development Bank
BB Florestal	Forest Loan of Bank of Brazil
CBO	Community Based Organisation
CPF	Collaborative Partnership on Forests
CTF	Conservation Trust Fund
DDI	Domestic Direct Investment
DI	Direct Investment
EBRD	European Bank for Reconstruction and Development
ECA	Export Credit Agencies
ETFRN	European Tropical Forest Research Network
EU	European Union
EuropeAid	European Agency for International Development
FAO	Food and Agriculture Organisation of the United Nations
FDI	Foreign Direct Investment
FONAFIFO	*Fondo Nacional de Financiamiento Forestal* (National Fund for Forestry Finance – Costa Rica)
GEF	Global Environment Facility
GFF	Global Forest Fund
HCVF	High Conservation Value Forest
IADB	Inter-American Development Bank
IAF	International Arrangement on Forests
IAIF	Forest Investment Attractiveness Index
IBRD	International Bank for Reconstruction and Development
ICSID	International Centre for Settlement of Investment Disputes

IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFF	Intergovernmental Forum on Forests
IFIM	Innovative Financing and Incentive Mechanisms
ILO	International Labour Organisation
IPF	Intergovernmental Panel on Forests
IMF	International Monetary Fund
ITTO	International Tropical Timber Organisation
KfW	*Kreditanstalt für Wiederaufbau* (German Development Bank)
M&A	Mergers and Acquisitions
MDB	Multilateral Development Bank
MDF	Medium Density Fibre Board
MIGA	Multilateral Investment Guarantee Agency
NEF	National Environmental Fund
NFP	National Forest Program
NGO	Non-Governmental Organisation
OA	Official Aid to Countries and Territories in Transition
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OP	Operational Programs
OSB	Oriented Strand Board
PROFOR	Program on Forests
PROMECIF	Process to Improve the Business Climate for Forest Investment
PRONAF Florestal	*Programa Nacional de Fortalecimento da Agricultura Familiar - Florestal* (National Program of Family Farming Incentives for Agro-Forest Systems – Brazil)
PROPFLORA	*Programa de Plantio Comercial e Recuperação de Florestas* (Program for Commercial Planting and Recovery of Forests – Brazil)
SFM	Sustainable Forest Management

TDR	Tradable Development Rights
TIMO	Timber Investment Management Organisation
TNC	The Nature Conservancy
UK	United Kingdom
UN	The United Nations
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
USAID	United States Agency for International Development
US$	United States Dollar
WB	The World Bank
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
WTO	World Trade Organisation
WWF	World Wildlife Fund

1 – INTRODUCTION

1.1 – Background

Finance/funding of Sustainable Forest Management (SFM) and of the International Arrangement on Forests (IAF) appears prominently among the issues that countries have been debating in the UNFF, and having up-to-date information of the present situation of the major flows of financial resources directed to the forest and forest-based sector worldwide is of extreme importance in facilitating the work of the Forum.

Recent and updated data on forestry finance/funding is lacking. The majority of past reviews on the issue are already outdated, and there is no new recent survey or compilation of data that can provide the latest developments (from 2001/2002 onwards) on the issue. A brief, precise and objective review of the main funding/finance resource flows will perfectly fill in this blank.

The United Nations Conference on Environment and Development (UNCED), meeting in Rio de Janeiro in 1992, adopted Agenda 21 and the Forest Principles, which called for "new and additional" financing for developing countries for their efforts and activities related to sustainable development. As a follow-up to the United Nations Conference on Environment and Development, an intergovernmental and participatory policy process was initiated through the ad hoc Intergovernmental Panel on Forests (IPF), 1995-1997, and the ad hoc Intergovernmental Forum on Forests (IFF), 1997-2000. At the recommendation of IFF, the Economic and Social Council established the United Nations Forum on Forests in 2000. (UNFF, 2003)

IPF and IFF strongly emphasised financing. The final reports of IPF and IFF conveyed the message that current financial resources were insufficient for combating deforestation and promoting sustainable forest management. IPF/IFF concluded that while domestic financing should be the main source, external financing, in particular ODA, was vital for developing countries. IPF/IFF also raised the issue of growing but unevenly distributed private financing and called for proper valuation of forest resources and development of markets for forest goods and (UNFF, 2003). With the creation of UNFF the issue of finance continued to be an important theme and as one of the main means of implementation of SFM as well as of the program of work of the Forum and of the IAF.

1.2 – Objectives

The general objective of this report is to present to the UNFF Secretariat brief, recent and updated information on the funding and financing of the forest sector worldwide. It also presents the recent surveys on the issue, main trends on forestry and describes some innovative mechanisms.

1.3 – Scope

The geographic scope of this study is worldwide, disaggregating the funding and financing information and major findings by regions of the world. The highlights of major funding recipient countries are presented by country level, for the most relevant ones.

1.4 – Methodology

The consultant developed this study as a desktop work/research study focusing on data and statistics compilation, and on analysis of trends relied on the knowledge of major international economic forces/developments in financial/investment markets and policies.

This study was based on secondary funding and finance data and information from the following main sources:

i. ODA including multilateral and bilateral donor agency funds, The World Bank, Regional Development Banks, UN organisations, ITTO, FAO, GEF, multilateral grant aid institutions, and others;

ii. Private Sector investments (domestic and foreign) from company information;

iii. Domestic (National) public sector funding/investments from country information; and

iv. STCP data base;

v. Other sources.

The following tasks were performed by the consultant:

- Synthesis of the main findings of recent surveys and reviews on the evolution and trends of the major funding/investment flows directed to the forestry sector, including, separately, ODA (multilateral and bilateral donor agency funds, World Bank, Regional Development Banks, UN organisations, ITTO, FAO, GEF, multilateral grant aid institutions, etc.), Private Sector investments (domestic and foreign), and Domestic (National) public sector funding/investments.

- Compilation, presentation and analysis of updated data and information (yearly basis, at least from 2000 to 2004) on these same funding/investment flows to forestry; highlighting of the major recent changes, and main evidence explaining the changes, and showing the relevant differences in comparison with trends of last decade.

- Major trends and critical factors for such trends, and outlooks.

- Some existing innovating funding mechanisms/funds.

2 – EXECUTIVE SUMMARY

This report presents the findings of a brief study on the main types of funding and investments flows worldwide, with special focus in the forestry and forest-based sector. The study aims at fulfilling the needs for update information about the theme to help support discussions within the UNFF and in this way contribute to the review of the effectiveness of the International Arrangement on Forests (IAF), which includes finance/funding of Sustainable Forest Management (SFM).

This study, commissioned by the UNFF Secretariat to the author, is in line with the UNFF discussion covering the means of implementation (finance) of its programme of work, and with the requirement that the question of finance should be addressed at each session of the UNFF.

2.1 – Recent Surveys and Knowledge on the Issue

The difficulties involving data collection, compilation and analysis of information on forest funding and investments worldwide are widely recognised. The existing surveys of major financing and funding resource flows directed to the forest and the forest-based sector worldwide are in most of the case outdated, with a few concise and informative reviews published after 2002. Estimating the investments in the forest sector is a difficult task as up-to-date information on the issue is scarce or not available.

The most relevant information can be collected from international bodies (UN organisations such as the UNCTAD, the World Bank, regional development banks, and others), international agencies (multilateral and bilateral donor agencies, ITTO, FAO, GEF, others), national government/public agencies of some countries, and the private sector (domestic and foreign). However, the information available is in most of the cases disperse or do not refer specifically to investments in the forest sector.

Investments may be classified according to the existing mechanisms (funding, financing, investments, loans, grants, others), sources (domestic/foreign) and institutions (public/private). These categories tend to be mixed with each other through various combinations and joint financing arrangements. (Table 01)

Table 01 – Major Sources of Funding and Financing to the Forest Sector

<table>
<tr><th rowspan="3">Source of funding</th><th colspan="3">Beneficiary/recipient</th></tr>
<tr><th rowspan="2">Public sector</th><th colspan="2">Private sector</th></tr>
<tr><th>Commercial</th><th>Noncommercial</th></tr>
<tr><td>Domestic</td><td>➢ Government Departments
➢ Government Agencies (National And Decentralised, E.G., Forest Corporations)
➢ Research Institutions (Sectorial, E.G., Forestry Institutes And General, E.G., Universities)</td><td>➢ Forest Companies
➢ Sectorial Investors
➢ TIMO
➢ General Direct Investors
➢ Large-Scale Landowners</td><td>➢ Subsistence farmers
➢ Rural communities (including indigenous communities)
➢ CBOs or looser affiliate community networks
➢ NGOs (mostly implicit investments, in kind)</td></tr>
<tr><td>Foreign</td><td>➢ Bilateral Donors
➢ Multilateral Donors (Including Funding Institutions Of International Conventions)
➢ Research Institutions (Sectorial And General)</td><td>➢ International Forestry Companies
➢ Sectorial Investors
➢ Specialist Direct Investors (E.G., Revolving Environmental Funds)
➢ General Direct Investors (e.g., TNCs)
➢ Institutional Equity Investors (e.g., Banks, Pension Funds, Insurance Companies)</td><td>➢ Foundations
➢ Specialist concessionaire funds (e.g., sinking environmental funds)
➢ Philanthropists, benefactors
➢ International NGOs</td></tr>
</table>

Source: Chandrasekharan 1996a & 1996b, Joshi 1997, UNDP 1997; cited by Costa et al (1999), adapted by the author.

2.2 – State of Funding/Financial Flows to the Forest Sector

(i) *Estimates of the Financial Requirements:* the total estimate of financial requirements for the upstream forests and SFM worldwide US$ 31.25 billion per year of the UNCED (1992) was revised up to US$ 33 billion per year in 1996 (Pretoria Workshop on Financial Mechanisms and Sources of Finance of SFM). Out of this total, capital equipment and infrastructure would account for 37.0 %, protection of forest services for 18.5% and institutional development and capacity building for 17.0 %. According to the UNFF (2003) those figures have been criticised for neglecting compensation for deforestation and forest degradation. Thus, adding the related disinvestments, the total required financing should in fact amount to a total of US$ 69.3 billion per year. Recent estimates of the financing required to achieve the necessary improvements for implementation of SFM in the tropics by the 18 ITTO member-countries was US$ 11 billion per year;

(ii) *Private Investments (Direct Investments):*

- In this study, private investments were considered as **Direct Investments** (DI). Direct investments can be divided in **Foreign Direct Investment** (FDI) and **Domestic Direct Investments** (DDI), the latter considered, for the purpose of this study, as gross fixed capital formation. DI are by far the most important source of finance to develop economic activities all over the world and this also applies to forest-based activities. Since the late 1980's, the world has experienced a strong expansion of the DI flows particularly of foreign direct investments (FDI) as result mainly of the globalisation process, associated to the financial markets liberalisation. The DI flowing into a country depends significantly on the climate for investment.

– *Global Private Investments*: Traditionally, global DI are concentrated in developed countries, mainly in the USA, European Union and Japan, and this partly explains the traditional supremacy of DDI. Recently, developing countries have taken a more prominent position, mainly a result of growing investments in emerging countries such as China/Hong Kong, Mexico, Brazil, and Eastern European countries such as Poland. Increase in the participation of developing countries in total DI over the 1995-2004 period: from 24% in 1995 to 27% in 2004.

  - *DDI:* Domestic direct investments have the strongest contribution to DI, with a participation of over 90% in average along the last decade. Between 1996-2005, the participation of DDI in DI was the lowest (79.1%) in 1999, but after that period the DDI share increased and is now levelled again over 90%.

  - *FDI:* Foreign direct investments have a relatively small participation in the total worldwide DI. In the last decade, FDI have participated, in average, with less than 10% of the total global DI. From the mid 1980s up to 2000, the FDI participation in worldwide DI grew to 21%, as a result of globalisation and opportunities for investors (such as M&A) in a larger number of countries. However, such a booming growth in FDI was not sustained after 2000. Historically global FDI have been concentrated in the developed countries. UNCTAD data (2005) points out that the main developing countries that benefited from FDI between 2002-2004 were China, Hong Kong (mostly in 2004), Brazil, Mexico, and Singapore. On the other hand, the main investors were developed countries, including USA, United Kingdom, France, Canada and the Netherlands

– *Private Investments in the Forest Sector*: The forest sector worldwide has passed through a strong restructuring process during the 1990s, influenced basically by globalisation. The restructuring process was based mostly on the consolidation process through M&A operations. Despite the relative importance of DI in the forest sector, the data available on such investments are limited. An IMF article has made reference to the role of private investments in the forest sector in comparison with other sources. The article pointed out that the total amount invested in 1993 in the forest sector worldwide (US$ 21.5 billion) was concentrated in private and domestic public investments with 46.5% each, with ODA responding for only 7% of the total.

  - The climate for investment in a country: is a major factor for private investment in the forest sector. This is of particular importance for SFM that requires long-term rotations. Investments in the forest sector are affected by a combination of sectorial factors, that can be categorised as (i) Supra, generated in a higher organisational level and usually related to actions of the government and international agencies, (ii) Inter, generated in other economic sectors that can affect the forest business, and (iii) Intra, internal factors of the forest sector that directly affect most of the sector's businesses climate such as forest policies.

  - The estimates of private investments in forestry corroborates its increasing importance and growing role in the sector. All the dynamics of events involving the restructuring of the forest sector worldwide (including M&A operations) favoured the growth of DI in the global forest sector, particularly in FDI from the second half of the 90s on. Estimations indicate that the amount of DI in the forest sector in a global scale exceeds US$ 60 billion a year, which represents about 1% of total DI in the world. In the forest sector, following the general trend, DDI share is predominant.

- According to UNCTAD data, the worldwide FDI in the agriculture, forestry, hunting and fishing activities combined reached US$ 1.8 billion in 2001-03, representing around 3.5% of the total FDI worldwide in the primary sector. The worldwide entrance of FDI in the forest industry (wood and wood products manufacturing) reached US$ 2.3 billion in 2001-03, which represented 4.5% of the FDI in the secondary sector and only 1.4% (2001-2003) of the total global FDI (primary, secondary and tertiary sectors).

(iii)Global and Domestic Public Investments (ODA and others)

– *ODA – Official Development Assistance.* ODA involve bilateral and multilateral donor agencies (WB, OECD), multilateral regional development banks (IADB, AFDB, ADB), UN organisations, among others.

- Estimating ODA trends in the forestry sector is a problem as consistent information is not readily available. Recent data from the Organisation for Economic Cooperation and Development (OECD) on the total ODA/OA commitments to forestry by donor (OECD and multilateral agencies) shows an annual average commitment to forestry (category as defined by OECD) of US$ 564 million between 1996-2004. On average such amount (committed to forests) is less than 1% of total commitments of donors to all sectors and programs, i.e., 1% of all aid, of overall development assistance.

- For 2004, reported funding and investments in forest projects (as defined by each agency) by major ODA donors, including the OECD countries, and the World Bank, IADB, AfDB and GEF amounted to over US$ 1.1 billion. An analysis of selected ODA with investment in forest projects are included in the report and summarised below:

- *The World Bank*: The WB's loans and credits approved a total of 129 forest projects worldwide between 1996-2005, amounting for almost US$ 6 billion (on average, 2.8% of the total Bank's loans and credits). There was an increase in the total amount in the past few years with a peak of US$ 1.2 billion in 2002 (6.4% of the Bank's total), US$ 733 million (3.0%) in 2004 and US$ 915 million (4.1%) in 2005. This is a substantial amount for one organisation, but in dealing with funding for the forest sector it is worth noticing that part of the total WB loans and credits are in fact DI, and cannot be capitalised as development agency investment.

- *Global Environment Facility*: GEF's grants to approved on-going forest projects worldwide, from 1996-2005, has added to almost US$ 175 million. This represents, on average, 3.6% of the total loans approved by GEF for all types of projects. There was an increase in the total amount in the past two years with a total of US$ 30 million (4.5% of all GEF's projects) in 2004 and US$ 34.7 million (5.7%) in 2005. Africa and Asia accounts for almost 60% of the GEF's grants for these projects.

- *Regional Development Bank*: The loans and credits of IADB (Inter-American Development Bank) to approved forest projects in Latin America and Caribbean, between 1996-2005 reached US$ 350 million. Since the peak of US$ 130 million allocated to forest projects in 2001 the amount approved of forest projects by the Bank dropped to almost US$ 70 million in 2002, US$ 35 million in 2003, US$ 38 million in 2004 and only US$ 9.6 million in 2005. Other regional development banks, such as the Asian Development Bank (ADB) and the African Development Bank (AFDB) also have investments in forest projects in their regions.

- *Others*: Data and information on funding is presented for other agencies and institutions including the AfDB, ADB, KfW Bankengruppe, and some UN Organisations.

(iv) Domestic Public/ Agencies Investing in the Forest Sector

- Financing and investments by domestic public institutions vary across countries depending on a number of factors including government policies and funding/budgeting capacity, objectives and priorities, type of forest activities (e.g., production, protection, others), among others.

- In the past several years, with the support of FAO, a number of developing countries in different continents have defined, or are in the process of defining, their forest policies and forest development strategies through the so-called National Forest Program Facility (NFP). The funding for those programs comes from both domestic and foreign sources. Domestic sources may include National Forest Funds as mechanisms designed to ensure that some portion of national revenues is set aside for forestry purposes.

(v) Other financing sources

- Other financing sources are most of the listed organisations with focus on scholarships and other small grants. Moreover, major NGOs with global activities have contributed with investments in the environment and forest protection worldwide (WWF, TNC, among others).

2.3 – Trends and Perspectives in the Forest Sector Funding/ Investments

Major trends in funding flows to the forest sector are summarised as follows:

i. Direct investments (private funding) have been the main source of funding investments in the forest sector; while ODA has reduced its relative importance;

ii. The emergence of regions with large forest plantations with the availability of fast-growing, low-cost raw materials has attracted capital investments and promoted the development and expansion of a forest industry. New important players in wood products manufacturing and consumption include China, other Asian countries, Russian Federation, Eastern European and some Latin American countries;

iii. FDI has been rapidly increasing in developing countries, but is concentrated in a few countries. Those countries receive most of the private financing, while low-income countries are largely dependent on ODA;

iv. Forest financing towards forest protection and preservation and community forests has been provided primarily by bilateral and multilateral donor agencies;

v. Considering economic profit and lack of proper incentives, under given circumstances, the response of investing on SFM has been worse than investing in other land uses;

vi. Some trends in development financing suggest that SFM faces a change on financial environment but, unfortunately, nothing indicates that official flows would reach the required levels in the short or medium-run;

vii. The climate for investment in a country represented by a stable economy, institutional and policy environment as well as specific intra and inter sectorial factors, are a requirement to attract investments;

viii. Financing strategies should concentrate on improving revenue collection, leveraging private investments and creating stable policy and institutional environments, including secure ownership rights and coherent forest policies towards SFM;

ix. Innovative mechanisms may not be efficient if property rights are not secure. Without economic reforms, efforts leveraging FDI may not provide the expected results.

Based on the extensive review carried out by the consultant the major perspectives on forest funding and investments are the following:

i. Total investments in the forest sector are expected to continue at the same level as observed in the recent past;

ii. DI in the forest sector will most probably maintain the current levels of investments;

iii. The importance of conservation easements is growing, mostly as a result of the new approach adopted by TIMO in USA when dealing with forestlands as a separate asset;

iv. M&A in the forest industry will likely continue in the future, but at a slower pace than in the past, given the changes in the worldwide economy and competition regulations.

2.4 – Critical Analysis of Forest Sector Funding/Investments

The review carried out clearly points out that DI, particularly DDI, is by far the most relevant source of funding and finance for forestry and forest-based sector. Over the years DI have generally contributed with more than 90% of the total value invested, amounting to around US$60 billion per year.

The trend analysis also pointed out that the relative importance of DI is growing, while ODA is declining. Innovative funding sources have been indicated as an option to fill in the gap left by declining ODA, but there are still several problems to be solved (as pointed out below) and it will take some time before these alternatives become more relevant.

There is a low expectation that proper incentive mechanisms to invest in SFM (particularly for tropical natural forests) will be available in the next years, and natural forests will continue to be less competitive than other land uses, as long as externalities are not properly taken into account.

There are a number of critical factors involved with the increase of funding/investment flows, as well as the efficient allocation of the available funds. Some of the major critical factors are highlighted below:

i. *Climate for investments:* particularly in developing countries, this is a critical factor for attracting DI (either FDI or DDI) for the forestry and forest-based sector;

ii. *Critical aspects of financing SFM:* The three main challenges are (a) how to increase financing to meet the requirements of transition to SFM; (b) how to channel the existing financing from unsustainable practices to sustainable ones; and (c) how to make SFM profitable and lessen the need for additional external financing;

iii. *Risks and uncertainties:* Reducing risk and uncertainty that arise particularly from the long time period involved in forest and SFM investments are an important action to increase funding and financing to the forest sector;

iv. *Making funding and finance for forestry and forest-based sector more effective:* Adjusting the donor's and the recipient's priorities to make funding and financing more effective;

v. *Inadequate rent capture:* Institutional conditions and market imperfections, such as lack of competition and incomplete information as well as complicated rent collection procedures are issues to scrutinize;

vi. *Need for innovative financing mechanisms:* Developing these mechanisms, as a complementary source of funds to support SFM, is of outstanding importance in many cases, especially when elements such as biodiversity and water conservation and other environment and social values are important components.

2.5 – Concluding Remarks

Based on the information available and on the discussion presented in the report, the author points out the following concluding remarks of the study:

- **Needs for Investments in Forestry/Forest-Based Sector**

  – The difficulties involved with the data collection, compilation and analysis of information for forest investments worldwide are widely recognised. Existing surveys of worldwide funding and investment flows to the forestry and the forest-based sector are outdated with a few concise and informative reviews published after 2002;

  – There is no agreement on the amount invested in forestry and in the forest-based sector worldwide every year. However, an estimate for the total global investments amounts to around US$ 64 billion per year, including all sources (DI, ODA, and others), with US$ 18 billion in upstream forests and SFM and about US$ 46 billion in downstream forest-based industry and trade;

- Estimates of the financial needs for forestry and SFM worldwide point out to between US$ 33 billion and near US$ 70 billion, depending on whether environmental externalities (e.g., compensation for deforestation and forest degradation) are included or not.

- **Investments in Forestry and Forest-Based Sector**

  - The most important type of investment in forestry and in the forest-based sector is Direct Investment (DI). Under this category Domestic Direct Investment (DDI) predominates with over 90% of the total investments. The remaining investments (less than 10%) come from FDI. DI have increased after 2001 as result of the improvement of the internal climate for investments;

  - DI concentrates mostly in developed countries and on forest plantations and related downstream industrial processing and trade projects. This has been a result of the nature of the investment projects with focus on economic returns. Out of the total invested, around 30% is driven towards SFM (forestry) and the remaining 70% to forest-based industries and trade;

  - Foreign Direct Investments (FDI) concentrate in the improvement of the economic return of trans-national corporations, mostly from the pulp and paper segments, and in Mergers and Acquisitions (M&A). Trends on the latter have been on investments in the Southern Hemisphere (e.g., Brazil, Uruguay, Chile, New Zealand). Information on the percentage of FDI actually applied in SFM is scarce;

  - Official Development Assistance (ODA) has been declining over the past several years. A brief analysis of the investments from a selected group of major ODA donors (i.e., WB, GEF, IADB) has indicated their low average investments in forest-based projects (between 3-5% of their total global investments). The percentage is lower (1%) if taking into account OECD statistics on total ODA investments;

  - National public investments have been limited in developing countries. Example of some innovative funding include some National Funds such as the Costa Rican FONAFIFO fund for Payment for Environmental Services (PES), the Mexican forest fund, and past initiatives for forest plantations in various South Hemisphere countries.

- **Critical Funding**

  - Lack of funds has been a critical matter especially for developing countries and tropical natural forests. Investments in SFM have been below the estimated needs. This is linked to the fact that the private sector is not willing to assume the high associated risks, low returns, increasing transaction costs, and internalisation of environmental costs.

- **Alternatives Under Discussion**

  - There has been a strong need for the international community to discuss the issue of investments / funding for forestry and the forest-based sector in its agenda.

- Several countries and international organisations throughout the world have been developing some innovative financial mechanisms and instruments for SFM in recent years. To different extent these mechanisms have shown some success becoming promising tools to be properly applied and/or adapted to different regions and conditions.

- A number of options have been suggested in recent years to overcome the problem of lack of funding in forest activities worldwide. For instance, the Oslo Workshop on Financing SFM has discussed ways of increasing financial resources from existing and prospective sources. Besides discussion on mechanisms such as the Global Environment Facility (GEF), the Clean Development Mechanism (CDM) of the Kyoto Protocol, and improving the effectiveness and efficiency of available resources the workshop has also given attention to the proposition of a Global Forest Fund (GFF);

The major aspects related to the financing and investments in SFM and the forest-based sector need to be discussed and addressed in specific international fora, as it may be the case of the next UNFF Session.

3 – MAJOR FUNDING/INVESTMENTS FLOWS TO THE FORESTRY SECTOR

3.1 – Initial Considerations

This chapter presents information on the main types of funding and investment flows with special focus in the forestry and forest-based sector worldwide. The aim is to support UNFF discussion covering the issue of finance and funding of SFM as one of the common items to be addressed by the Forum and as one of the means of implementation of the plan of action and programme of work also defined by the Forum.

Precise and update information and data are of extreme importance for decision-making, policy implementation, and monitoring of any programme. Without accurate and reliable investment data, policy makers are hindered in the formulation of appropriate investment policies. This is particularly true in developing countries and in the least developed countries where data collection is a major challenge. The lack of such information can highly jeopardise the process.

3.2 – Recent Surveys and Knowledge on the Issue

The difficulties involving data collection, compilation and analysis of information on forest funding and investments worldwide are widely recognised. Surveys of major financing and funding resource flows directed to the forest and the forest-based sector worldwide are outdated with a few concise and informative reviews published after 2002. Estimating the investments in the forest sector is a burdensome and somewhat difficult task as up-to-date information on the issue is scarce or simply not available.

In order to obtain an overview of the topic it is necessary to gather the existing information throughout a number of different sources, whose information not necessarily add up or show the big picture.

Most relevant information can be collected from **international bodies** (UN organisations such as UNCTAD, The World Bank, Regional Development Banks, others), **international agencies** (multilateral and bilateral donor agency funds, ITTO, FAO, GEF, others), **national government/public** agencies of some countries and the **private sector** (domestic and foreign). However, in spite of the relatively large number of sources, the information available are in most of the cases disperse or do not refer directly for investments in the forest sector.

Prior to advance on more detailed aspects of the issue, it is important to bear in mind some classification of investments according to the existing mechanisms (funding, financing, investments, loans, grants, others), sources (domestic/foreign) and institutions (public/private). These categories tend to be mixed with each other through various combinations and joint financing arrangements (see table 02).

Table 02 - Funding and Financing Institutions to the Forest Sector

Source of funding	**Beneficiary/recipient**		
	Public sector	**Private sector**	
		Commercial	**Noncommercial**
Domestic	➢ government departments ➢ government agencies (national and decentralised, e.g., forest corporations) ➢ research institutions (sectorial, e.g., forestry institutes and general, e.g., universities)	➢ forest companies ➢ sectorial investors ➢ general direct investors ➢ large-scale landowners	➢ subsistence farmers ➢ rural communities (including indigenous communities) ➢ CBOs or looser affiliate community networks ➢ NGOs (mostly implicit investments, in kind)
Foreign	➢ bilateral donors ➢ multilateral donors (including funding institutions of international conventions) ➢ research institutions (sectorial and general)	➢ international forestry companies ➢ sectorial investors ➢ specialist direct investors (e.g., revolving environmental funds) ➢ general direct investors (e.g., TNCs) ➢ institutional equity investors (e.g., banks, pension funds, insurance companies)	➢ foundations ➢ specialist concessionaire funds (e.g., sinking environmental funds) ➢ philanthropists, benefactors ➢ international NGOs

Source: Chandrasekharan 1996a & 1996b, Joshi 1997, UNDP 1997; cited by Costa et al (1999), adapted by the author.

In reality the possibility of the forest sector to access financial resources for financing exists through a number of mechanisms and sources that include, among others, the bilateral cooperation, the multilateral cooperation (i.e., ODA – Official Development Assistance) and the private sector (foreign and domestic direct investments directly from forest-based companies and commercial bank).

The main **bilateral sources** of financing/funding are primarily official loans and donations, foreign direct governmental loans, and access to credits for exports. Because of their structure **multilateral donors/sources** have a geographic scope much broader than that of bilateral agencies. As for multilateral sources, the most representative include: loans from global development banks such as the World Bank, credit (loans) and technical assistance of regional development banks (e.g., IADB, ADB, AfDB EBRD, EuropeAid), projects/ activities of the UN system (e.g., UNDP, ILO, FAO, IFAD) and others (e.g. GEF others).

Commercial private sector flows, both foreign and domestic, are generally categorized as:

- Direct investments – effective or direct control/ownership of the business through the ownership of the capital (the holding of “equity”, or of “shares”, that legally allow the control of capital and command of the investment). These may include the supply of capital goods (e.g. equipment, land, etc.) or services (e.g., training);

- Indirect investments – as either debt (e.g. commercial bank loans) or equity (e.g., common and preferential stock, portfolio investment, or venture capital).

As for the **sources of private funding**, they can be direct investments (foreign and domestic) from private institutions and companies, among others. The sources can include credit for exports, access to particular credits in the external market, TIMO (Timber Investment Management Organisations) and pension funds.

3.3 – State of Funding/Financial Flows to the Forest Sector

3.3.1- Estimates of the Financial Requirements

Estimates of the financial requirements for forests/SFM worldwide are rare and/or likely outdated. An assessment, which is often quoted, was conducted during the United Nations Conference on Environment and Development (UNCED). It stated that **US$ 31.25 billion** would be needed **annually** to implement SFM worldwide. Of that amount, ODA was supposed to contribute 18 %, or US$ 5.67 billion.

Although the contribution of ODA estimated by UNCED is more a target for ODA, a World Bank estimates for 1993 points out what ODA had been, with a much lower contribution, around 7% (IMF, 2003). The same source further refers to the fact these funds available for forest in the mid 1990´s have, since then, declined sharply.

A few years later, at the Pretoria Workshop on Financial Mechanisms and Sources of Finance of SFM held in 1996, the total figure was **revised up to US$ 33 billion per year**, with capital equipment and infrastructure accounting for 37.0 %, protection of forest services for 18.5% and institutional development and capacity-building for 17.0 %. (UNFF, 2003)

According to available information (e.g. UNFF (2003)) those figures have been criticised for neglecting compensation for deforestation and forest degradation. Thus, adding the related disinvestments, the total required financing should in fact amount to **US$ 69.3 billion per year**.

In fact the issue of the quantification of resources needed for SFM is controversial, and has been part of the international agenda since the Rio Conference. To try to clarify and resolve the question in terms of tropical forests The International Tropical Timber Organisation- ITTO developed, with the support of an Expert Panel, a methodology to estimate resources needed to achieve the organisation so called Year 2000 Objective (ITTO, 1995).

Subsequently The International Tropical Timber Council-ITTC invited country members to apply the developed methodology and estimate resources needed and costs incurred in achieving Year 2000 Objective. A new Expert Panel was convened in early 1997 to review countries estimates. The Expert Panel concluded that the estimates made by the member countries did not provide a complete and accurate accounting of resources needed, and faced difficulties to aggregate the information and provide a definitive global figure. In any case the total of only **18 countries** that have provided the estimates was **US$ 22.6 billion for the 1997-2000 period** (ITTO, 1997).

This in practice means that investments in SFM solely for the 18 tropical countries that provided the information averaged at around **US$ 5.7 billion per year**. The amount was well over the expectations and so ITTO decided, in view of lack of resources, to narrow the working areas and consider a list of investment priorities to the following years. Over 80% of the investment required, as identified by the Expert Panel, involved four countries: Brazil, Indonesia, Philippines and Malaysia. Later, some ITTO studies have addressed this issue and revised the additional financing required to achieve the necessary improvements for implementation of SFM in the tropics to **US$ 11 billion per year.**

In terms of financing, forestry has inherent characteristics that increase the complexity of financing in addition to conventional challenges. The long rotation period, which introduces extra risk to the investment, as well as the uneven distribution of costs and revenues over time, are well-known special features of forestry. Moreover, forests provide many non-market benefits in particular environmental services (at a local, national, regional or global scale), for which there is no market of any significant consequence so far and, thus, do not produce direct revenue to investors. This particularly affects the self-financing possibilities of forestry/SFM.

Multilateral pathways of technology transfer being developed through conventions such as the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol are expected to become new opportunities, such as through the commoditisation of carbon sequestration. (UNFF, 2003). It is also a common understanding that efforts should be made to develop enabling environments that would enhance the domestic private sector investments including local communities in SFM activities. (UNFF, 2003)

In the discussion about the needs of international funding for SFM, an important mechanism that has been proposed over the years, although not yet implemented, is that of a **Global Forest Fund** (GFF). The background of a GFF has been behind the calls made at the UNCED for new and additional financial resources from the international community to support SFM in developing countries. The proposal for establishing an "International/Global Forest Fund" was first made during the IPF process (fourth session in 1997) as a mechanism that could internalise global externalities of forests. Those that defend the proposition consider it as a tool to assist the international community in combating deforestation and forest degradation in developing countries, and in promoting SFM worldwide. Such proposal has been controversial and remained unresolved during the IPF/IFF negotiations (Joshi and Chipeta, 2001). After that, the proposition of a GFF was among one of the three topics of discussion of the **Oslo Workshop on Financing SFM**, held in Norway in 2001: (i) feasibility of an international Investment Promotion Entity (IPE) for SFM; (ii) encouraging private investment in SFM; and (iii) ways of increasing financial resources from existing and prospective sources, including the Global Forest Fund.

3.3.2 – Private Investments

3.3.2.1- Global Private Investments (Total)

Direct Investments (DI) are by far the most important source of finance to develop economic activities all over the world and this also applies to forest-based activities. In view of its importance in the global investments the issue is explored in more details in this paper.

The amount of direct investments flowing into a country depends very much on the investment climate. Direct investments can be divided in **Foreign Direct Investment** (FDI) and **Domestic Direct Investments** (DDI). For the purpose of this study, DDI is considered as the gross fixed capital formation (IADB, 2004).

UNCTAD is the major source of information for global statistics on direct investments (DI) both for domestic direct investments (DDI) and foreign direct investments (FDI). Most of the information presented in this section is based on UNCTAD database and on previous reviews on the issue from studies carried out by the IADB.

Since the late 1980's, the world has experienced a strong expansion of the DI flows particularly of foreign direct investments (FDI) as result mainly of the globalisation process, associated to the financial markets liberalisation. (IADB, 2004) Globalisation is changing the nature of manufacturing worldwide. The cumulative effect of numerous factors, including the development of global communication networks, the extension of transportation networks, universal availability of the latest and best technologies worldwide, and the lowering of barriers to international competition through the World Trade Organisation – WTO have promoted globalisation and corroborated to increase DI. (Bowyer, 2004)

In the second half of the 1990's, the DI flows did intensified even more, due to different driving forces such as:

(i) Continuous liberalisation of FDI;

(ii) Extension of bilateral and multilateral commercial treaty;

(iii) Intensification of privatisation processes;

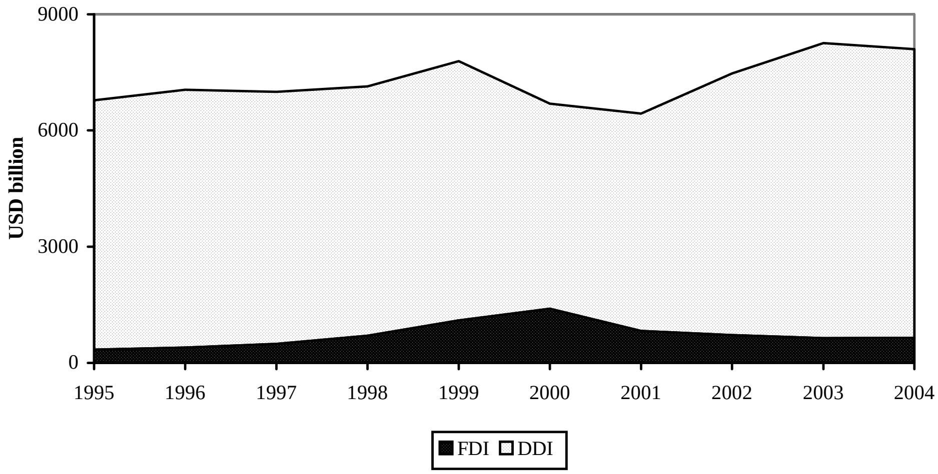
(iv) Trends of fusions and trans-frontier acquisitions (M&A), mainly in the USA, EU and Japan; and

(v) Outstanding performance of the American economy that served as a motor to the other worldwide economies. (IADB, 2004)

Such dynamics of events was important for the record DI that reached almost US$ 8,000 billion in 1999 and US$ 8,200 billion in 2003. The 1999 record was affected by a number of events in the subsequent years, including the terrorist attacks in USA, and the flows of DI dropped in 2001. This was followed by a new recovery in the subsequent years as shown in figure 01 (UNCTAD, 2005). It also can be noticed that FDI declined in value and share, and DDI became even more important in the last few years.

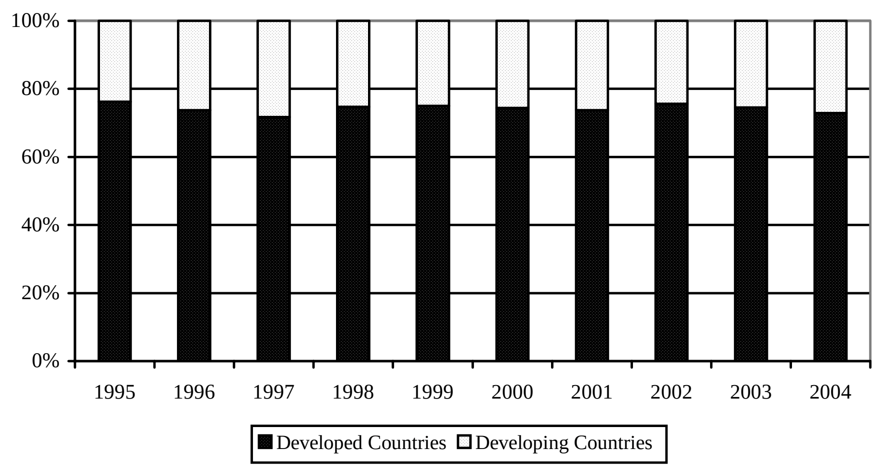
Traditionally, DI are concentrated in developed countries, mainly in the USA, European Union and Japan, and this partly explains the traditional supremacy of DDI. Recently, developing countries have taken a more prominent position, mainly a result of investments in emerging countries such as China/Hong Kong, Mexico, Brazil, and Poland. Figure 02 shows a slight increase in the participation of the DI in developing countries over the 1995-2004 period: from 24% in 1995 to 27% in 2004 (UNCTAD, 2005).

Figure 01 – Worldwide Evolution of DI (1995 – 2004)



Source: UNCTAD – World Investment Report (2005), adapted by the author

Figure 02 – Worldwide Evolution of the DI Distribution (1995 – 2004)

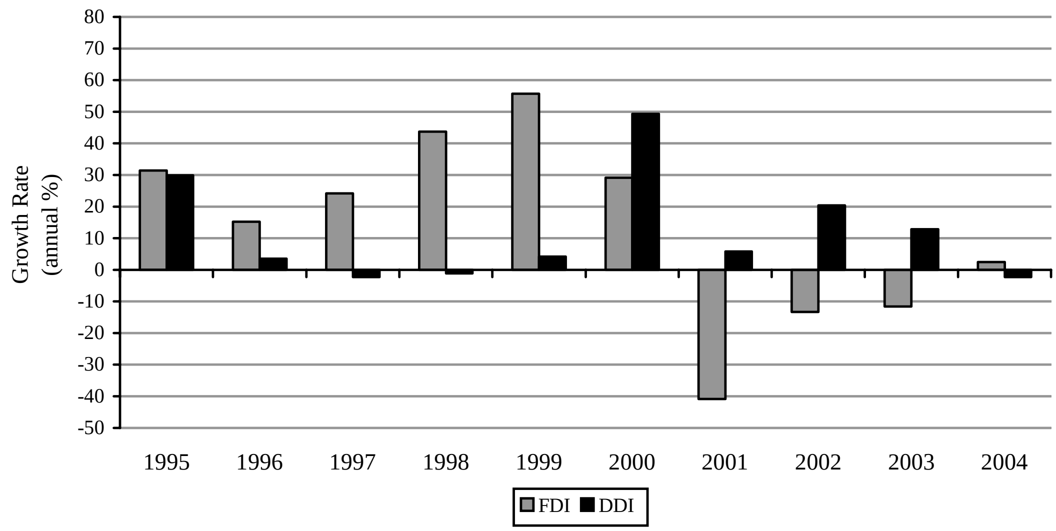


Source: UNCTAD – World Investment Report (2005), adapted by the author

DDI growth rates reached around 4% per year for the period 1990-2002, and for some time FDI proved high growth rates, exceeding 50% in 1999. As a result of this fact practically most of DI growth until 2000 has been related to the strong FDI increase, but this has changed in the last years.

The growth rates of the FDI and DDI between 1995-2004 are observed in figure 03. FDI was particularly high in the second half of the 1990s. The DI loss verified from 2001-2003 was result of the FDI flow decrease. A good part of the changes in FDI may be explained by the growth or decrease in M&A in recent years. Over most of the period only DDI have showed significant growth rates.

Figure 03 – Worldwide Growth Rates of FDI and DDI (1995 – 2004)

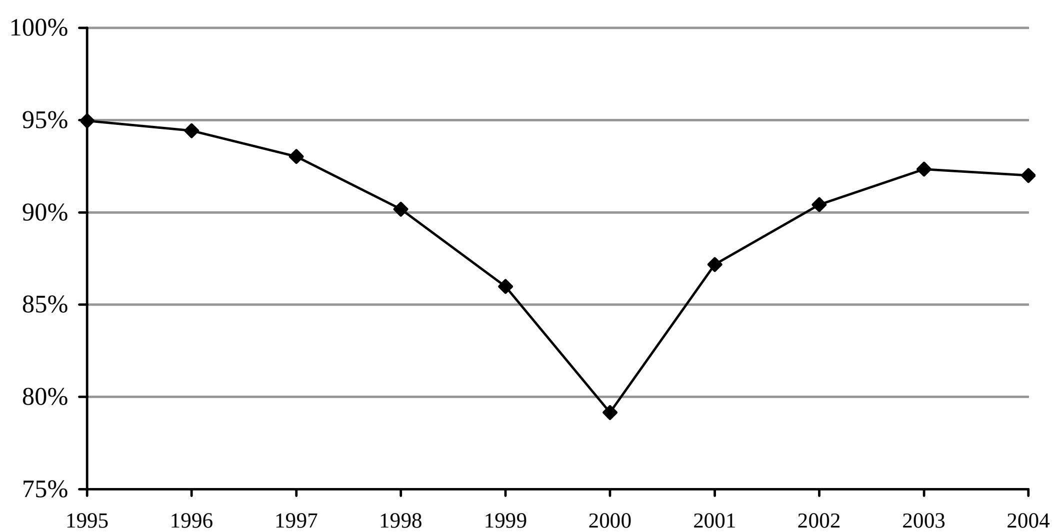


Source: UNCTAD – World Investment Report (2005), adapted by the author

- Total Domestic Direct Investment (DDI)

The DDI have a strong contribution to the DI, and along the last decade the DDI participated, in average, with over 90% of DI. Figure 04 shows the recent changes in the DDI share in the total DI. The 1999 participation of the DDI in the DI was the lowest (under 79.1%) in the data series, but after that period the DDI share increased and is now levelled again over 90% (see figure 04).

Figure 04 – Worldwide Evolution of DDI Participation on the DI (1995 – 2004)

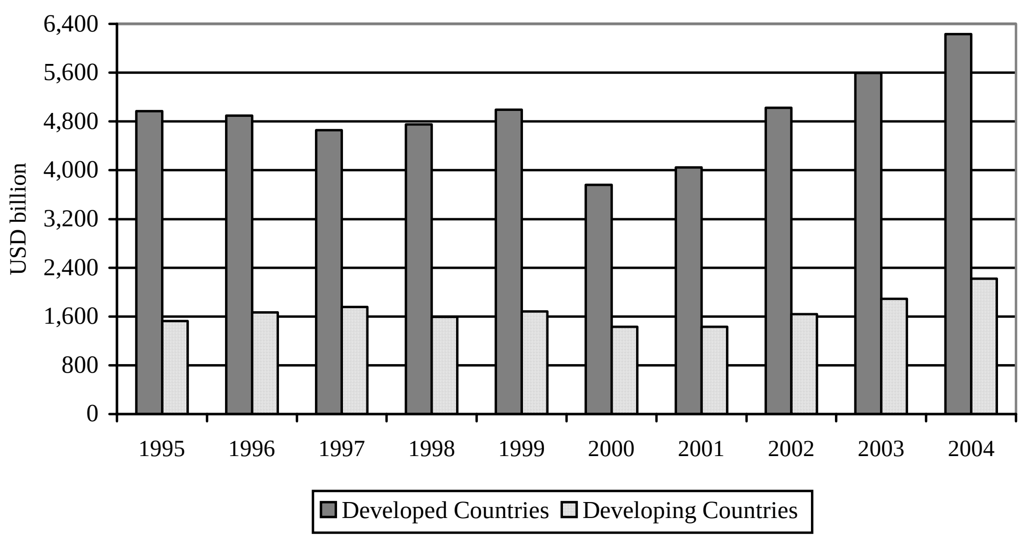


Source: UNCTAD – World Investment Report (2005), adapted by the author

Information on the amount of DDI along the last years, separately by developed and developing countries is presented in figure 05. DDI between 1995 and 1999 worldwide was relatively stable, not exceeding US$ 7,000 billion.

In 2000 a slight decrease in the DDI worldwide was observed, basically a result of reduction in DDI in both the developed and developing countries. After that, DDI increased and reached in 2004 a figure around US$ 8,400 billion, being US$ 6,200 in developed countries and US$ 2,200 in developing countries. This represents a total increase in value of 62% over the lowest level, achieved in 2000.

Figure 05 – Worldwide Evolution of DDI by Group of Countries (1995 – 2004)



Source: UNCTAD – World Investment Report (2005), adapted by the author

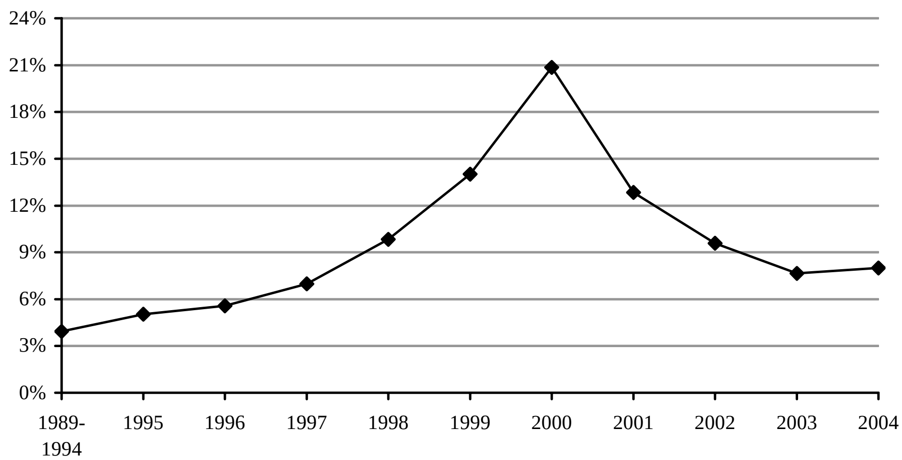
- Total Foreign Direct Investment (FDI)

FDI have a relatively small participation in the total worldwide DI. In the last decade, the FDI have participated, in average, with less than 10% of the total global DI. From the mid 1980s up to 2000, the FDI participation in worldwide DI grew substantially, as a result of globalisation and larger opportunities for investors in a larger number of countries (IADB, 2004)

FDI is generally regarded as a more stable source of capital than loans, which, in turn, are associated with the increasing risk of debt repayments. Moreover, FDI fosters competition and technological externalities and spillovers, which also contribute to dynamic efficiency (UNFF 2003).

Figure 06 shows the change of FDI share in the total DI between 1995-2004. After a steeper increase in the second half of the 1990s and a record participation of 21% in 2000 (with a record investment level of US$ 1,300 billion), the share fell to less than 9% in 2004.

Figure 06 – Worldwide Evolution of FDI Participation on the DI (1995 – 2004)



Source: UNCTAD – World Investment Report (2005), adapted by the author

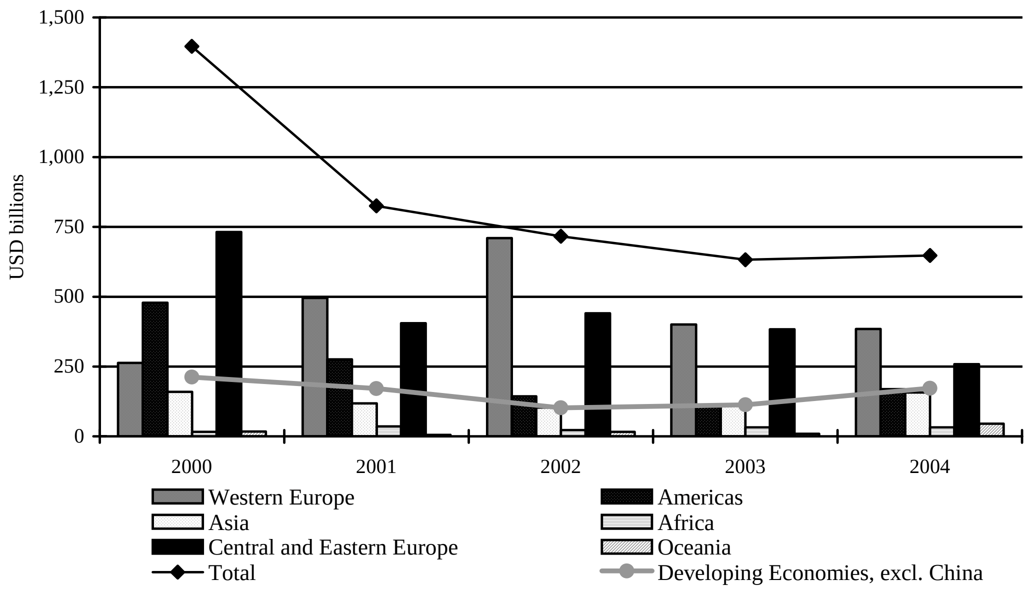
The strong increase in FDI in the late 90´s was explained by M&A in developed countries, largely associated with privatisation program, and with the outstanding performance of the American economy, that strongly supported large investments of web-based and high-tech companies (IADB, 2004; UNCTAD 2005).

Such a booming growth in FDI was not sustained after 2000. As it can be observed in figure 07 FDI decreased from near US$ 1,300 billion in 2000 to US$ 650 million in 2004, a 53.5% drop over the period. Such reduction was observed primarily in the Americas (mostly in North America) and in Western Europe, while Central & Eastern Europe, Asia and Oceania, had faced oscillation in FDI during the 4-year period.

UNCTAD data (2005) points out that the main developing countries that benefited from FDI between 2002-2004 were China, Hong Kong (mostly in 2004), Brazil, Mexico, and Singapore. On the other hand, the main investors were developed countries, including USA, United Kingdom, France, Canada and the Netherlands (see figure 08).

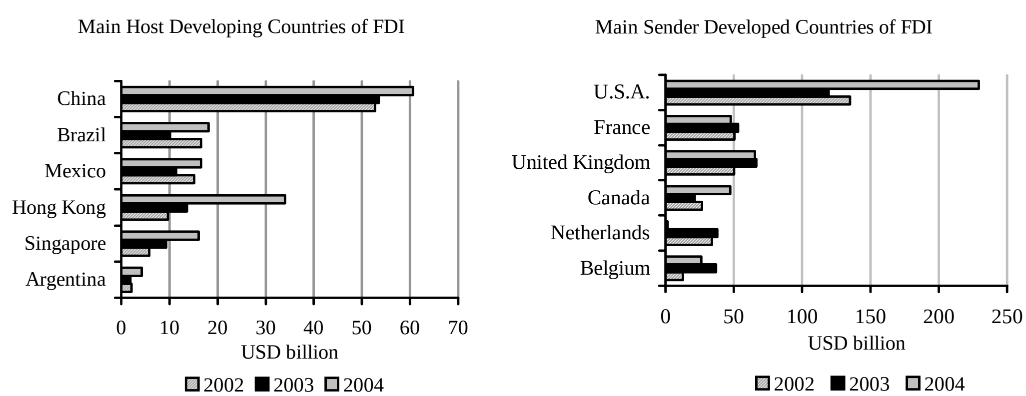
Historically FDI have been concentrated in the developed countries. By the end of the 80s, the developing countries had less than 15% of the worldwide flow of FDI, while the developed countries concentrated the remaining 85%. In any case such scenario has changed significantly during the 90s, and the share of FDI moving to developing countries increased. This effect is largely associated with investments in China.

Figure 07 – Worldwide Evolution of FDI Inflows (2000 – 2004)



Source: UNCTAD – World Investment Report (2005), adapted by the author

Figure 08 – Main FDI Inflows and Outflows by Country (2002-2004)



Source: UNCTAD – World Investment Report (2005), adapted by the author

Selected indicators of external financing through FDI into developing countries, grouped by regions, for the year 2003 and 2004 are presented in table 03. Overall, the net inward of FDI in developing countries has increased worldwide, except in the Middle East and North Africa from 2003-2004. Most of these resources have been invested in East Asia and Pacific, in Latin America and the Caribbean, followed by Europe and Central Asia.

Table 03 - Net Inward Foreign Direct Investment in Developing Countries in 2003 and 2004

Region	**Total FDI (US$ billions)**		**% Change**
	2003	**2004**	
East Asia and Pacific	59.6	63.6	6.7%
Europe and Central Asia	35.6	37.6	5.6%
Latin America and the Caribbean	36.5	42.4	16.2%
Middle East and North Africa	4.8	4.1	-14.6%
South Asia	5.2	6.5	25.0%
Sub-Saharan Africa	10.1	11.3	11.9%
All Developing Countries	**151.8**	**165.5**	9.0%

Source: The World Bank (2005), adapted by the author

3.3.2.2- Private Investments in Forestry and Forest-Based Sector

The worldwide forest sector has passed through a strong restructuring process throughout the 90s, influenced basically by globalisation. The restructuring process faced by the forest sector worldwide was based mostly on a consolidation process thought M&A operations (IADB, 2004).

The recent restructuring of the forest sector in most countries was associated with several factors including, in particular:

i. Increase in DI:

All the dynamics of events involving the restructuring of the forest sector everywhere in the world favoured the growth of DI in the global forest sector, particularly in FDI from the second half of the 90s on.

Based on a IADB study (2004) the recent increase of DI in the forest sector was mainly influenced by the following driving forces:

a) Search for improvement in the competitiveness levels and identification of new markets;

b) Search for maximum production capacity of the forests (roundwood production) in important producing regions;

c) Improvement of forest productivity, particularly forest plantations in the Southern hemisphere; and

d) Strong increase of the international trade of forest products based on a large liberalisation of the markets in addition to tariff reduction.

ii. Horizontal integration of the forest industry:

The strategies adopted by forest-industrial companies were directed primarily towards horizontal integration, instead of vertical integration (forest - industry). As a result of this process forestlands emerged as a new class of market assets for investors, in opposition to what had been previously observed, when forestlands belonged to the forest industry, governments or small landowners.

Despite the relative importance of DI in the forest sector worldwide, the available data on such investments are limited. As previously mentioned, studies of the World Bank (IMF, 2003) have made reference to the growing role of the private sector in the forest sector. The total amount invested in 1993 in the forest sector worldwide (US$ 21.5 billion) was concentrated in private and domestic public investments with 46.5% each, with ODA responding for only 7% of the total.

Information on **Domestic Direct Investments- DDI** is almost non-existent in spite of the fact that in many countries DDI in the forest sector are extremely important. This is the case of developed countries with a strong forest industry, and also some selected developing countries, such as Brazil where local private sector has announced massive investments in forest plantations and in the industry (around US$ 15 billion in the next 5-7 years, mostly associated with expansions in pulp and paper operations). On total it is estimated that from the overall DI investments in the forest sector on average along the year over 90% is DDI.

In the case of **Foreign Direct Investments- FDI** more data and information are available, but these are in most of the cases presented in an aggregated form, and therefore limits the analysis (IADB, 2004). In spite of the limitations on the availability of information related to the total amount of DI in the forest sector worldwide, it is possible to estimate investments based on the growth of the worldwide production of forest products.

Estimations indicate that the amount of DI in the forest sector (forestry, industry and trade) in a global scale **exceeds US$ 60 billion a year**, which represents about 1% of total DI in the world taking into account the 2002 invested amount as a basis (US$ 6,000 billion). In the forest sector, following the general trend, DDI share is predominant (IADB, 2004)

In the global forest sector, regardless the DI types (DDI or FDI), DI associated to the forest industry takes a major position. Only a reduced amount of DI is invested in forestland, plantations, and forest related activities such as harvesting. This is mainly because, particularly in the dominant pulp and paper industry, industry is capital intensive. (IADB, 2004)

FDI and also DDI are highly dependent of the investment climate of countries. This is particularly important for sustainable forest management, as it is a long-term investment. A study carried out by IADB (Nascimento and Tomaselli, 2005) identified that investments in the forest sector are affected by a combination of factors, that can be categorized as supra, inter and intra sectorial factors. These factors can be generally defined as follows:

i. **Supra Sectorial –** External factors generated in a higher organisational level and usually related to actions of the government and international agencies. Macro economic factors, such as exchange rate, interest rate, inflation and other are typical examples of supra sectorial factors.

ii. **Inter Sectorial –** External factors generated in other economic sectors that can affect the forest business. Typical examples of inter sectorial factors that have strong impacts on forest business climate are land ownership and agriculture policies;

iii. **Intra Sectorial -** Internal factors of the forest sector that directly affect most of the sector's businesses climate such as forest policies, transaction costs associated to forest production and others.

- *FDI in Forests (SFM)*

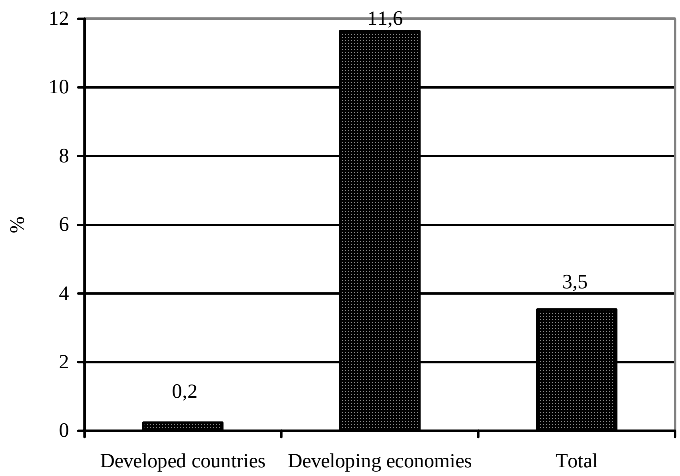
According to UNCTAD data, the worldwide FDI in the agriculture, forestry, hunting and fishing activities combined reached US$ 1.8 billion in 2001-03, representing around 3.5% of the total FDI worldwide in the primary sector. Most of the FDI in those activities are concentrated in the developing countries (see figure 09). There is no separated/disaggregated information for the forest sector, in any case it is estimated that most probably FDI in upstream forestry and SFM does not surpass 50% of the above value, meaning that it would be quite less than US$ 1 billion per year.

In the past few years, forestlands and especially forest plantations have been the main target for FDI. Within such context, it is important to consider the role of TIMO (Timberland Investment Management Organisations), which have been outstanding as DI, both as DDI or FDI.

There is still the fact that part of FDI in timberlands is most probably not captured by UNCTAD and other organisation compiling information on the subject. This is due to the fact that some transactions, particular involving forest acquisitions in developing countries are financially structured in such a way that cannot be in fact categorized as DI.

Forest assets usually have value added lower than in the forest industry. As previously mentioned FDI in forest assets have been mostly directed towards developing countries. In this case, some Asian and Latin American countries have been a target of the FDI. In Indonesia, for instance, the Swedish-Finn Stora Enso Oy invested around US$ 100 million in forest plantations of fast-growing Acacia plantation. In Brazil and Uruguay, heavy investments in eucalyptus and pine plantations have been under way or have been announced, in several cases by some global private companies such as International Paper and Stora Enso (in Brazil) and Botnia and Weyerhaeuser (in Uruguay). Moreover, it is important to single out the FDI that are being made in large-scale fast-growing forest plantations in North and South America, some European countries and in Oceania particularly in the USA, Canada, New Zealand, Argentina, Brazil, Chile and Uruguay, through TIMO (Timber Investment Management Organisations). (IADB, 2004)

Figure 09 – Worldwide Participation of Forestry, Agriculture, Hunting and Fishing Activities in Total FDI in the Primary Sector (2001 – 2003)

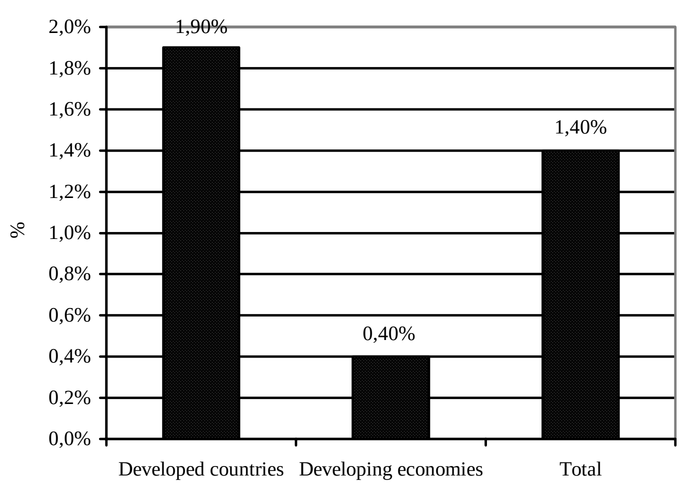


Source: UNCTAD – World Investment Report (2005), adapted by the author.

- FDI in the Forest Industry

The worldwide entrance of FDI in the forest industry (wood and wood products manufacturing) reached **US$ 2.3 billion** in 2001-03, which represented 4.5% of the FDI in the secondary sector and only 1.4% (2001-2003) of the total global FDI (primary, secondary and tertiary sectors). As it can be observed in figure 10 in this case developed countries have the largest share. However, such amount does not include investments and financing in trade of forest products.

Figure 10 – Worldwide Participation of Forest Industry (Wood and Wood Products) in FDI in the Secondary Sector (2001 – 2003)



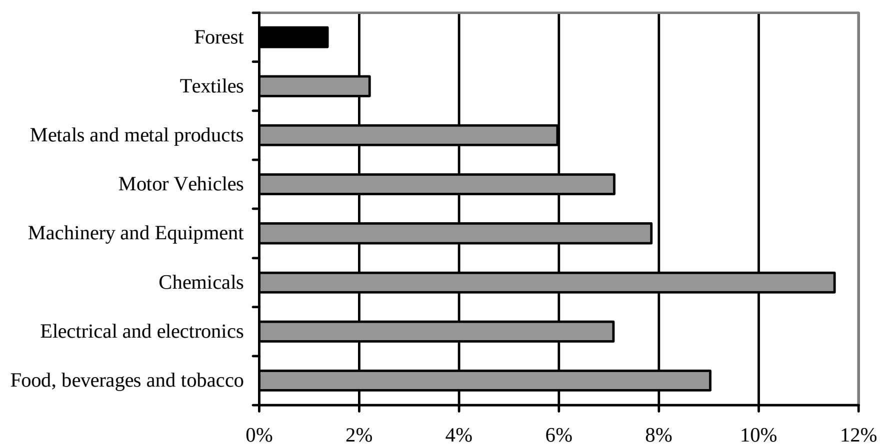
Source: UNCTAD – World Investment Report (2005), adapted by the author

The FDI in the forest industry also have been influenced by the strong process of privatisation of state forests (native and planted) that happened particularly along the 1990s in some countries, such as New Zealand and South Africa (IADB, 2004).

Figure 11 compares the relative importance of the FDI in the forest industry with other industries for the period 2001-2003. Forest industry is the eighth major industrial activity as for FDI in the world.

The forest industry, particularly the pulp and paper is a capital-intensive industry. As a result, larger FDI in the forest sector are, almost always, tied to the pulp and paper industry investments. The consultant estimates that investments tied to this industry represent about 70% of the FDI in the forest sector in a global scale (IADB, 2004).

Figure 11 – Worldwide FDI in the Most Relevant Industrial Segments (2001 – 2003)



Source: UNCTAD – World Investment Report (2005), adapted by the author

As expected from the general DI data previously presented FDI in the forest sector considerably exceeds public official development assistance- ODA. In recent years, forest financing has been characterised by an increase in FDI especially into developing countries. It is estimated that total FDI, including investments in forests, industries and trade is around US$ 5 billion a year. This is a relatively small amount when compared with total DI, nevertheless it is approximately five times ODA in SFM/forests (slightly over US$ 1.1 billion in 2004). This corroborates, to some extent the argument that current levels of investment in the forest sector, both domestic and foreign, fall far short from the level necessary to achieve the full potential of well-managed forest resources to contribute to poverty alleviation, to maintain the protection of vital environmental services, and to ensure sustainable economic growth in developing countries and countries with economies in transition (PROFOR, 2004). Such level may vary according to the source of estimation; however one could understand the "official" level as the UNCED estimation, where countries formally agreed with the opportunity for the Forest Principles.

As previously mentioned FDI in the forest industry is mostly directed towards developed countries (94%). This is very much related to the fact that investments are mostly related to those activities that present high-added value and capital intensive operations, such as the pulp and paper industry, are predominantly oriented towards the developed economies (IADB, 2004).

On the other hand there are perspectives that this is changing as in recent years investments are shifting away towards emerging and developing countries, with high forest resource potential and economic growth prospect such as Brazil, Chile, Uruguay, China, Russia, India, Poland, among others. FDI is likely to increase in those countries in the short and medium-run.

In spite of the apparently high investments involving DI, IPF/IFF and UNFF have identified that the financial resources needed for SFM are often beyond the capacity of many developing countries. Historically developing countries have been highly dependent on international investments, loans and development assistance. Based on the realities of the new financial structure in the world as a whole, developing countries are increasingly operating with limited loans and are searching for alternatives to increase the role for FDI (UNFF, 2003). This explains, for instance, efforts of many countries to develop their own invest promotion organisations and programs.

The perspectives change from country to country and within the forest sector. The perspectives are different for instance when dealing with solid wood products industry based on tropical timber, where investments are much lower, when compared with the pulp industry. In the solid wood industry FDI in the Eastern European and Asia have a higher relative importance than the global average (IADB, 2004)

The Baltic countries and Russia have also received, in the last few years, significant investments in the solid wood products industry. Investments of the Finn-Swedish Stora Enso Timber in Russia, Lithuania and Latvia, for instance, have been glimpsing the expansion of the installed capacity of conifer lumber, as well as the guarantee of the wooden raw material supply for the corporation's pulp and paper plants in Scandinavian. (IADB, 2004)

Economic and other reasons define shifts in the FDI all over the world. In Asia for many years FDI were predominately made by Japanese, Malaysian, Korean and Chinese in countries such as Papua New Guinea and Solomon Islands, aiming to guarantee the wood supply to their main operations located in the home countries. Changes in forest concessions and particularly in the concessions assignment rules, economic advantages and other reasons made Japanese and Chinese companies shift investments to other supply source, and large investments were diverted to Russia.

Malaysian and Korean companies have also heavily invested in the solid wood products industry outside the Asian continent. In the last few years, Malaysian companies have increase investments in the forest and timber industry in Africa (Cameroon) and in South America (Brazil, Guyana and Surinam). (IADB, 2004)

In Asia, China has also gained a prominent position in terms of attracting FDI, particularly investments in plywood and furniture industry. Investors in the Chinese forest industry are from several countries, but at present most relevant are from Taiwan, Hong Kong and Singapore. The country is also attracting investments in the pulp and paper industry (IADB, 2004).

In any case, as a general rule, FDI in the forest sector are to a large extent associated with financing and funding productive and commercial forest projects, mostly based on forest plantations. Only a small amount of FDI is driven towards, for instance, natural tropical forest, forest protection, non-wood forest products, and environmental services.

The strategy of global forest companies is to invest worldwide as a way of taking advantage of investment opportunities, increasing their financial return, diversifying operations, competing globally, and increasing market share among others. This is a basic strategy to the top five global private corporations: International Paper, Georgia-Pacific Group, Weyerhaeuser Company, Stora Enso Oyj, and UPM- Kymmene Corporation

These transnational corporations are in the vast majority associated with the pulp and paper sectors, which draw a large and significant amount of investments. Although the companies do not provide detailed information on their investments, they and other global private companies have driven most of the investments to developed countries (including Canada, United States, Finland, Australia and Japan). Outside the develop world, more recently, some developing countries have also been selected, including mainly China, Brazil, Uruguay and some other countries in Southeast Asia.

The investments of those companies are based on their own capital besides borrowing capital from commercial private, government, and international banks. Such banks, which have been key players in the support of investment plans of private companies, have set specific borrowing rules to lend money for such projects. One such a case as a private bank, is the ABN AMRO Bank, which has developed and published a set of risk polices specifically targeted to the forest sector and covering a range of environmental safeguards, including pollution control in pulp mills, acceptable forest management practices, and guidelines for plantation establishment.

ABN AMRO financing policies prohibit the financing of operations that involve log extraction from primary forests or from a High Conservation Value Forest- HCVF (PROFOR, 2004). Other banks have adopted similar approaches and this is a constraint especially for the tropical forest industry.

Nowadays, establishing a modern and competitive pulpmill can cost the majority of over US$ 1.0 billion. Investments of such magnitude can come only from global corporations or from joint ventures involving local partners and development banks, willing to cover the associated risks.

The North American and Finnish companies are in the front line of the global reconstruction of forest industries, particularly in the case of the pulp and paper industry. At the moment, among the 10 greater worldwide paper and cardboard producers five are North American and three are Finnish. (IADB, 2004)

Following a worldwide trend, FDI in the forest industry has also been in fact impelled by the M&A. The M&A process, faced by the forest industries and sectors in the world, has been a result of strategies directed to:

(i) Search for new and competitive sources of wood supply;

(ii) Economy of scale;

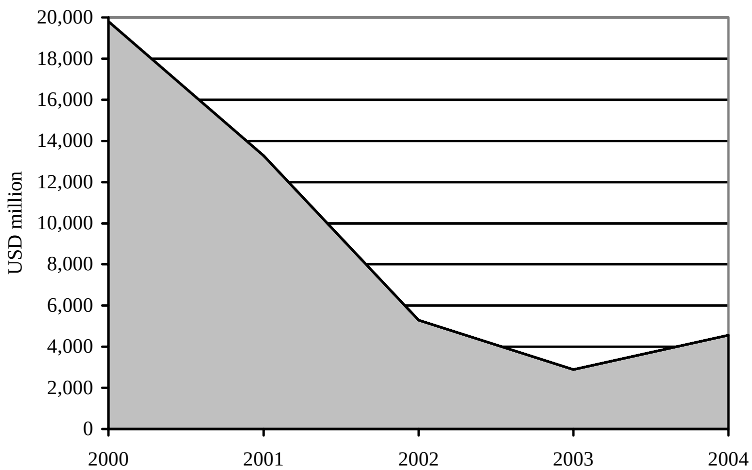
(iii) Search for new markets; and

(iv) Integration of the production of solid wood and the pulp and paper products.

In the last 10 years, the M&A in the forest industry grew at a rate of 15% a year. By the end of the 1990s, the M&A recorded high amounts invested, culminating with a number record of US$ 23.6 billion in 2000 (see figure 12).

Such amount has strongly been influenced by major M&A happened in that year. It is worth mentioning the acquisition of the American Consolidated Inc. Papers by the Finn Stora Enso Oy (US$ 4.9 billion), as well as the acquisition of the New Zealander Fletcher Paper Co by the Norwegian Norske Skog ASA (US$ 2.5 billion), among others. However the M&A of forest industries (forest-based sector) have decreased in the past several years reaching estimated US$ 4.5 billion in 2004. (IADB, 2004)

Figure 12 – Worldwide Evolution of Mergers and Acquisitions in the Forest-Based Sector (2000 – 2004)



Source: UNCTAD – World Investment Report (2005), adapted by the author

The FDI and M&A by global private institutions depend on attractiveness of the business and on the climate for investments in the country under consideration. Thus investment promotion organisations are now more actively involved in improving investment climate in the forest sector, and this in many cases increases their role in national forest-related policies.

3.3.3 – Public and Development Agencies Investments

3.3.3.1- Official Development Assistance (ODA) Investments in the Forest Sector

ODA, according to OECD, is defined as those resource flows to selected developing countries and to some multilateral institutions for flows which are:

(i) provided by all donor official agencies including state and local governments (or by their executive agencies), and

(ii) each transaction is administered with the aim of promoting economic development and welfare of developing countries and is concessional in character and conveys a grant element of at least 25% (calculated at a discount rate of 10 per cent).ODA can come from a number of different institutions. As example, institutions involved with ODA flows include the works and actions of the World Bank, the GEF and regional development banks (e.g., IADB, AfDB, ADB), organisations of the United Nations, multilateral grant aid institutions, among other institutions. The way these institutions provide funding vary but in general it can be through grants and loans, in the form of debts, or through technical assistance.

According to FAO, developed countries have committed only a small part of their GNI (gross national income) as ODA. With the average ODA/GNI ratio at only 0.22% for members of the Organisation for Economic Co-operation and Development (OECD), the target of 0.7% is still a distant goal. Furthermore, the promised commitments of the UNCED have largely failed to materialise and while levels of ODA rose from 1990 to 1998, levels are generally low compared to UN targets.

Estimating ODA trends in the forestry sector is a problem as consistent information is not readily available. A 1999 analysis by the Program on Forests (PROFOR) estimates that from 1986 to 1997, ODA bilateral and multilateral resources in the forestry sector rose from US$784 million in 1986 to US$1,270 million in 1997.

Recent data from the Organisation for Economic Cooperation and Development (OECD) on the total ODA/OA commitments to forestry, by donor (OECD and multilateral agencies) and recipients is shown respectively in tables 04 and 05 for the 1996-2004 period. The annual average commitment to forestry category (as defined by OECD) was US$ 564 million over the period. On average such amount (committed to forestry) is less than 1% of total commitments of donors to all sectors and programs, i.e., 1% of all aid, of overall development assistance.

Table 04 –ODA/OA Commitments to Forestry by Donor and Year (1996-2004)

Donors	**Total Commitment (US$ million)**									**Average 1996-2004**
	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	
OECD Countries	**484.2**	**511.9**	**182.5**	**137.1**	**324.5**	**300.7**	**195.1**	**518.8**	**239.6**	**321.6**
Multilateral	**161.5**	**410.0**	**394.7**	**55.5**	**151.2**	**189.0**	**483.3**	**101.7**	**236.0**	**242.5**
EC	14.7	8.7	2.7	24.3	57.3	123.5	27.6	4.1	82.0	38.3
IBRD	16.0	91.0	100.0	-	-	17.4	127.9	21.3	-	62.3
IDA	16.0	148.9	292.0	18.0	-	-	309.6	42.7	119.0	135.2
IADB Sp. Fund	30.6	-	-	-	-	-	-	-	35.0	32.8
UNDP	-	-	-	1.9	-	-	-	-	-	1.9
Others	84.2	161.4	-	11.3	93.8	48.1	18.1	33.6	-	30.1
All Donors	**645.7**	**921.8**	**577.2**	**192.6**	**475.6**	**489.7**	**678.3**	**620.5**	**475.6**	**564.1**

Source: OECD; CRS Statistics (2006), adapted by the author.

It is important to mention that although OECD reports the total ODA/OA commitment as “All donors” (including OECD countries and multilateral agencies), it is not clear if some of the commitments are not duplicated.

The World Bank (represented primarily by IDA and IBRD) responds for most of the commitments to forestry among the multilateral agencies, with a total of near US$ 200 million in average over the 1996-2004 period (table 04).

The main recipient regions of ODA/OA resource flows to forestry are Asia (including both the Far East and South/Central) with a total of almost US$ 355 million (63% of the total). Sub-Sahara Africa and South America follows with respectively almost US$ 100 million and US$ 52 million.

A brief discussion and data on selected ODA institutions that have provided sizeable amount of financing to the forest related activities are presented below. The discussion and data cover primarily the WB (including IBRD, IDA, besides the associated institutions IFC, MIGA and ICSID), GEF, regional development banks (including IADB, AfDB and ADB) and a few other organisations of the UN. It is worth mentioning that these agencies and institutions report their funding allocated to forest-related projects, not informing whether or not some of the amounts are duplicated across agencies.

Table 05 –ODA/OA Commitments to Forestry by Recipient Region (1996-2004)

Recipients	**Total Commitments (US$ million)**									**Average 1996-2004**
	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	
Africa - North of Sahara	0.0	0.3	3.9	0.3	38.9	8.2	34.1	0.3	0.7	**9.6**
Africa - South of Sahara	108.6	56.2	66.3	79.1	150.2	146.6	122.0	95.4	73.0	**99.7**
North & Central America	38.1	17.0	23.9	25.6	53.9	9.1	16.9	26.5	82.3	**32.6**
South America	53.2	172.0	37.5	19.1	20.3	81.9	18.5	22.9	41.1	**51.8**
Far East Asia	155.4	156.4	338.6	26.7	92.1	188.8	222.1	314.4	176.1	**185.6**
South & Central Asia	268.1	505.9	90.5	18.7	107.3	36.9	263.4	141.1	90.3	**169.1**
Europe	16.2	0.0	15.4	1.3	2.0	0.4	0.4	16.8	9.6	**6.9**
Middle East	0.5	5.5	0.5	0.2	0.2	0.1	0.0	1.3	1.1	**1.0**
Oceania	5.4	8.5	0.6	21.7	10.7	17.8	0.8	1.9	1.4	**7.7**
World	**645.7**	**921.8**	**577.2**	**192.6**	**475.6**	**489.7**	**678.3**	**620.5**	**475.6**	**564.1**

Source: OECD; CRS Statistics (2006), adapted by the Author.

- *The World Bank Group*

The World Bank, as a multilateral development bank (MDB) has a role to play in the development of principles and agreed approaches, but the key to this process lies in the strengthening of national investment climates (PROFOR, 2004)

The World Bank Group is one of the main sources of assistance for development in the world for the most diverse activities, including forestry and forest products. Its main goal is to help to the people and poor countries. Five institutions related under a presidency owned by 184 member countries constitute the group: International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), besides the associated agencies International

Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA) and International Centre for Settlement of Investment Disputes (ICSID).

- IBRD – The International Bank for Reconstruction and Development has a supportive role in the World Bank's mission towards poverty reduction and improvement of living standards. The IBRD focuses on middle income and creditworthy poor countries, helping customers to get access to the capital and tools of management of financial risk, with more favourable conditions, longer periods of expiration and in a more sustainable way than other sources. In contrast to commercial banks, the IBRD is stimulated by the impact on development and not on profit maximisation. Its total annual budget (financing/investment) to loans has reached US$ 13.6 billions in 2005. The institution has directly been a player on the funding for forest activities in a number of countries. Out of the IBRD loans for all sectors in 2005 (US$ 22.3 billion), the amount allocated to the category **forest, agriculture and fishing** reached **US$ 1.5 billion** (9%).

- IDA - The International Development Association is also the part of the World Bank. IDA funds help poor countries to deal with the complex challenges they face in striving to meet the Millennium Development Goals. In 2005, the total IDA commitment for all economic sectors reached US$ 8.7 billion, with 5% been allocated for **forest, agriculture and fishing (US$ 435 million)**

- IFC – The International Finance Corporation is a member of the World Bank Group and is headquartered in Washington, DC. It shares the primary objective of all World Bank Group institutions: to improve the quality of the lives of people in its developing member countries, also promotes sustainable private sector investment in developing countries. The IFC has been doing business in the forest sector since the late 1960s, over which period it has provided US$ 1.5 billion to finance projects worth more than US$ 5 billion. Over the last 10 years, the **IFC's forest sector investments have been on average US$ 65–75 million per year.** These investments can be largely associated to DI. Financing to the forest sector continues to increase with approximately US$ 600 million in the pipeline. The IFC has substantial commitments in China and Russia (PROFOR, 2004). In 2005, the commitments of IFC for agriculture & forestry and pulp & paper sectors have reached US$ 605 millions, representing 9.4% of total commitments of the corporation.

- MIGA - The Multilateral Investment Guarantee Agency, as a member of the World Bank Group, has the mission to promote FDI into developing countries to help support economic growth, reduce poverty, and improve people's lives. Since its inception in 1988, MIGA has issued nearly 800 guarantees worth more than US$ 14.7 billion for projects in 91 developing countries. MIGA is committed to promoting socially, economically, and environmentally sustainable projects that are above all, developmentally responsible. The institution has been a player on funding forest activities in a large number of countries.

- ICSID - The International Centre for Settlement of Investment Disputes is an autonomous international organisation. However, it has close links with the World Bank. All of ICSID's members are also members of the Bank. Unless a government makes a contrary designation, its Governor for the Bank sits ex officio on ICSID's Administrative Council. The expenses of the ICSID Secretariat are financed out of the Bank's budget, although the costs of individual proceedings are borne by the parties involved. ICSID also provides facilities for the conciliation and arbitration of disputes between member countries and investors who qualify as nationals of other member countries. Its total annual budget (financing/investment) does not inform financing/investment per economic sectors (including the forest sector).

In addition, the World Bank houses the Program on Forests (PROFOR), a multi-donor trust fund program within the Environmentally and Socially Sustainable Development (ESSD) Forests Team. The sources of funding for PROFOR are from the Department for International Development (DFID) of the United Kingdom, the Finnish Department for International Development Cooperation, the Japanese International Forestry Cooperation Office, Swiss Development Cooperation (SDC). The German Government is an in-kind contributor. Moreover, the WB has the so-called “Forest Strategy and Operational Policy”, which set a proactive course for WB’s engagement in the forest sector.

The WB's loans and credits approved a total of 129 projects worldwide under the category of ‘forest’, amounting to almost US$ 6 billion for the period 1996-2005 (see table 06). This represents, on average, 2.8% of the total Bank’s loans and credits approved. There was an increase in the total amount in the past few years with a peak of US$ 1.2 billion in 2002 (6.4% of the Bank’s total), followed by a reduction in 2003 (1.8%) with a recovery thereafter: US$ 733 million (3.0%) in 2004 and US$ 915 million (4.1%) in 2005. This is a substantial amount for one organisation, but in dealing with total funding and finance for the forest sector it is important to take into consideration that part of the WB total loans and credits are in fact DI, and cannot be capitalised solely as development agency investment.

Table 06 – Worldwide The World Bank's Loans and Credits to Projects in Forest[(1)] per Year

Region	Total Loans and Credits - IBRD and IDA (US$ Million)										
	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total 1996-2005**
East Asia and Pacific	-	400	200	694	201	17	111	10	40	214	1,886
South Asia	28	378	39	17	-	-	108	200	620	160	1,549
Africa	0	5	289	43	11	8	619	3	54	125	1,158
Latin America and Caribbean	22	66	-	9	33	56	202	21	20	251	679
Europe and Central Asia	50	-	7	-	260	-	41	4	-	45	406
Middle East and North Africa	-	-	-	-	-	-	88	95	-	120	303
TOTAL	**100**	**849**	**535**	**762**	**504**	**81**	**1,169**	**333**	**733**	**915**	**5,982**

[(1)] ‘Forest’ category as defined by the World Bank

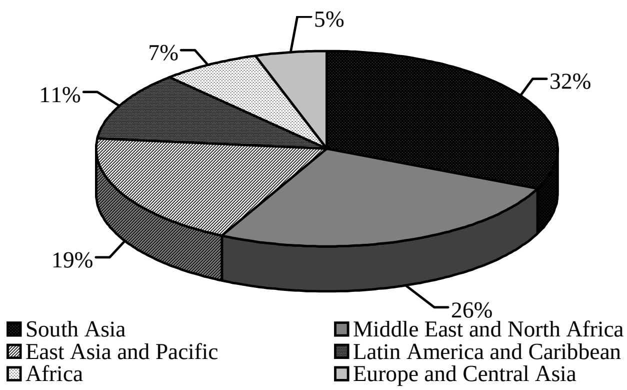
Source: World Bank – Projects Database, adapted by the author.

Figure 13 shows the distribution of the WB’s resources in forest allocated across the regions of the world. As it can be observed, Asia (East Asia/Pacific and South Asia) accounts for over 50% of the Bank’s total loans and credits in forest projects. Africa is also prominent with significant 19% of this total, followed by Latin America and Caribbean (11%) and Middle East and North Africa (5%).

As observed from the information presented in table 03, Asia obtained almost 50% of the total WB's Loans and Credits with the remaining almost equally distributed between Africa, Latin America and the Caribbean and Europe.

Among the overall discussion on the investments directed to the forest sector, the World Bank has recently discussed the issue in the so-called Forest Investment Forum, a meeting held in Washington DC in 2003 bringing together a large number of experts (see Box 01).

Figure 13 – Worldwide The World Bank's Loans and Credits Distribution to Projects Under Category 'Forest' by Region (1996-2005)



Source: World Bank – Projects Database, adapted by the author.

Box 1 – Forest Investment Forum (The World Bank)

In order to address the issue of investment in the forest sector, the Forest Investment Forum of the World Bank brought together 150 senior executives of domestic and multinational forest product companies, private and public sector financial institutions, and leading conservation agencies from around the world to Washington DC in October 2003. The event was organised jointly with the World Business Council for Sustainable Development (WBCSD), the World Wide Fund for Nature (WWF), Forest Trends, the International Finance Corporation (IFC), and the Program on Forests (PROFOR),.

Overall the forum was set out to: i) Identify opportunities for investments in environmentally and socially sustainable forestry in developing and economic transition countries; ii) Consider actions that the World Bank Group and forum participants could take to create an enabling environment for responsible private sector investment; and iii) Explore the willingness of forum participants to support a process to develop clearly defined and mutually compatible social, economic, and environmental investment guidelines specific to the forest sector. (PROFOR, 2004)

The result was a fifty-six page report including among others: (i) summary report of the Forest Investment Forum; (ii) discussion to overcoming constraints to private sector investment in socially, environmentally, and economically SFM: perspectives of leading forest industrial companies, conservation agencies, and financial institutions; and (iii) list of reference materials and sources.

Box 1 – Forest Investment Forum (The World Bank) – *continuing*

Among other aspects the Forum has highlighted that in wealthier countries forest health is improving, but in developing countries the demand for forest products and for environmental services from forests is increasing, in parallel with increasing demand for agricultural land. Emphasis was given to the need to find ways of investing that address the need for conservation and that support social measures, while at the same time addressing the expanding demand for wood products.

The Forum also emphasised to creating an enabling environment for private sector investment. It has stressed the emergence of investment opportunities in Brazil, China, India, Russia, and a number of other countries and increasing opportunities for collaboration between the World Bank and the various stakeholder groups that contributed time and input to the forum, and welcomed such collaboration in the future.

In a concluding discussion of emerging investment opportunities, the forum agreed to explore with national governments the possibilities for collaborative follow-up action between industry, conservation, and financial institutions for the practical application of some of the more promising initiatives that were presented by forum participants. A suggestion was made that forum follow-up activities should give special emphasis to major, forest-rich countries such as Brazil, China, Indonesia, the Democratic Republic of Congo, and Russia, which account for one-half of the world's remaining forest area. All five of these countries are seeking foreign private sector investment and will need strong external aid support to overcome the formidable constraints to investment identified by the forum.

At the same time, however, as it has been stressed it is important that follow-up activities should also target low-income, forest-poor countries such as India and countries of Sub-Saharan Africa. Forests, open woodlands, and small-scale forest product enterprises can in these countries make a significant contribution to poverty alleviation, household income, food security, and agricultural productivity.

Source: *Forest Investment Forum*, The World Bank (PROFOR, 2004)

- *GEF – Global Environment Facility*

The Global Environment Facility (GEF) is an independent financial organisation that provides grants to developing countries for projects that benefit the global environment and promote sustainable livelihoods in local communities. Since 1991, the GEF has provided US$ 4.5 billion in grants and generated US$ 14.5 billion in co-financing from other partners for projects in developing countries and countries with economies in transition. Donor countries contribute GEF funds: in 2002, 32 donor countries pledged US$ 3 billion to fund operations between 2002 and 2006.

GEF's implementing agencies - the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), and the World Bank - play key roles in managing GEF projects on the ground. Through them, the GEF has quickly amassed a diverse project portfolio serving the developing world, Eastern Europe, and the Russian Federation - more than 140 countries altogether.

GEF's **grants** to approved on-going projects worldwide under its so-called category 'forest', from 1996-2005, has added to almost US$ 175 million (see table 07). No forest project was approved on 1996-97. This represents, on average, 3.6% of the total loans approved by GEF for all types of projects. There was an increase in the total amount in the past two years with a total of US$ 30 million (4.5% of all GEF's projects) in 2004 and US$ 34.7 million (5.7%) in 2005. Those are projects that GEF classifies as forest ones, not accounting for a variety of projects under the biodiversity, conservation, and environment categories. It is important to mention that GEF's projects are more in preservation and protection of forests and not so much in SFM per se. Only recently, with OP 15 (from 2003/2004 on) have SFM projects started to be accepted by GEF.

The distribution of the GEF' loans in forest projects allocated across the world for the period 1996-2005 is presented in figure 14. Africa and Asia accounted for almost 67% of the total GEF's grants for forest projects. Asia accounts for the majority of the projects (43%) followed by Africa (24%), and Latin America and Caribbean (19%) and Europe and Central Asia (13%). A total of 1% was classified as global projects.

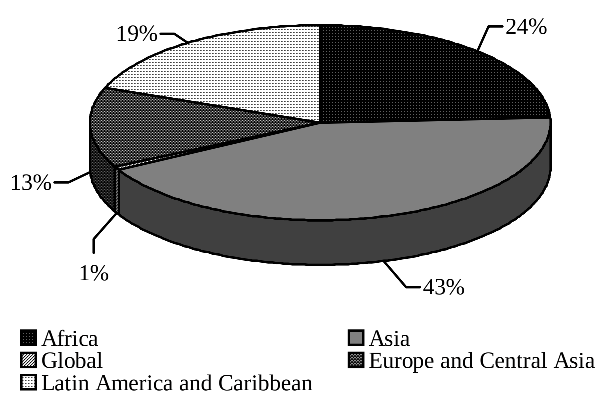
Table 07 – Worldwide GEF's Loans and Credits to Projects in Forest [(1)] per Year

Region	Total Amount (US$ Million)										
	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total 1996-2005**
Africa	-	-	0.74	0.75	6.30	0.00	12.37	0.98	10.27	10.50	41.90
Asia	-	-	12.20	23.61	6.86	16.35	1.78	1.35	11.66	1.00	74.80
Latin America and Caribbean	-	-	-	9.59	7.73	7.03	-	0.81	-	8.03	33.20
Europe and Central Asia	-	-	-	-	-	-	0.75	-	8.29	14.14	23.17
Global	-	-	-	-	-	-	-	-	-	0.99	0.99
TOTAL	**-**	**-**	**12.94**	**33.95**	**20.89**	**23.38**	**14.90**	**3.14**	**30.21**	**34.66**	**174.06**

[(1)] 'Forest' category as defined by GEF

Source: GEF – Projects Database, adapted by the author.

Figure 14 – Worldwide GEF's Loans Distribution to Forest Projects by Region (1996-2005)



Source: GEF – Projects Database, adapted by the author.

- *Regional Development Banks*

- *IADB – Inter-American Development Bank*

The Inter-American Development Bank (IADB) is a partnership between 19 Latin American countries and the United States and provides loans and technical assistance to 26 countries in Latin America and Caribbean (LAC) using capital provided by its member countries, as well as resources obtained through bond issues in international capital markets. Its mission is to contribute to the acceleration of the process of economic and social development of the regional LAC region, individually and collectively. Since it was created in 1959, the Bank has become a major catalyst in mobilising resources for the region and is an example of regional development bank to finance/investments in the forest sector.

As described in table 08, the **loans and credits** of IADB to approved projects under the IADB' category of 'forest' in Latin America and Caribbean, between 1996-2005 reached US$ 350 million. Since the peak of US$ 130 million allocated to forest projects in 2001 the amount approved of forest projects by the Bank dropped to almost US$ 70 million in 2002, US$ 35 million in 2003, US$ 38 million in 2004 and only US$ 9.6 million in 2005. However those figures represent only projects classified under the category of forests.

Table 08 – Main IADB's Loans and Credits to Latin American Projects in Forest (1) per Year

Region	Total of Approved Amount (US$ Million)										
	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total 1996-2005**
Nicaragua	15.30	-	-	-	-	44.70	-	7.30	-	-	67.3
Brazil	-	-	-	-	52.05	0.01	-	-	-	9.00	61.1
Honduras	-	-	-	-	0.15	25.00	0.20	27.63	-	-	53.0
Bolivia	-	-	-	-	-	-	21.00	-	28.50	0.35	49.8
Guatemala	-	-	-	-	-	-	40.00	-	-	-	40.0
Others	-	0.09	0.24	-	1.39	60.38	7.36	0.15	9.33	0.22	79.2
TOTAL	**15.30**	**0.09**	**0.24**	**-**	**53.59**	**130.09**	**68.56**	**35.08**	**37.83**	**9.57**	**350.3**

(1) 'Forest' category as defined by IADB

Source: World Bank – Projects Database, adapted by the author.

- *Asian Development Bank (ADB) and African Development Bank (AfDB)*

Other regional development banks, such as the Asian Development Bank (ADB) and the African Development Bank (AFDB) also have investments in forest projects in their regions. However information and compiled data were not readily available. Specifically on forest, the AFDB has reported the approval of only forest conservation project for Uganda in 2004 (US$ 40 million), out of US$ 2.7 billion, therefore a small percentage.

The ADB reports that for 2004, out of the total lending with government guarantee (US$ 4.9 billion), agriculture and natural resource projects accounted for 3.8 %. As for the total

323 Technical Assistance grant projects (amounting to US$ 197 million) approved in 2004, agriculture and natural resources represented 18% (US$ 27.2 million).

- *KfW Bankengruppe (Germany)*

KfW banking group provides support to the economy, society and ecology in Germany, Europe and worldwide. The bank's projects are about home finance or house modernisation, protection of the environment and the climate, Export and Project Finance or promotion of the developing and transition countries.

Besides, the bank is one of the ten biggest banks in Germany. In 2004, the KfW group raised long-term funds in the equivalent of € 52.1 billion in the capital market. From 1997 through 1999 commitments to partner countries totalled € 4.8 billion including € 1.3 billion for environmental and resource protection. No information is available on the amount allocated specifically to forest.

As KfW finances exports (acting as an export-facilitating organisation), and this is a strong component, as in the case of IFC a substantial part of the loans are in fact DI, including both FDI and DDI.

- *United Nations (UN) Organisations*

Organisations of the UN are part of the global public institutions that are involved with funding and finance of forest activities and SFM. Below is a brief description and actions developed by UNEP and FAO, two of the organisations under the mandate of the UN.

- FAO - The role of international organisations such as the FAO has become one of providing information, providing a neutral forum for discussion, and establishing norms, codes, and definitions. FAO can act as a focal point for interaction with national governments, and highlighted the FAO’s long-standing collaboration with the World Bank to help developing countries prepare investment projects. The organisation has also worked to encourage participants to engage in the ongoing intergovernmental discussions, such as the United Nations Forum on Forests (UNFF), and highlighted the work of the Collaborative Partnership on Forests (CPF). (PROFOR, 2004)

- UNEP – The United Nations Environment Programme aims at providing leadership and encouraging partnerships in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. As UNEP is a UN body, contributions from Governments are the core basis of its funding. The priority here is to secure increased regular contributions from Governments. Another important element in the current resource mobilisation activities include development of strategic partnerships with governments or individual ministries willing to consider additional contributions in support of UNEP's priority programmes or projects. The total environmental fund was almost US$ 60 million for 2005 from contribution of various countries. However, no information has been found on funds allocated specifically to forest-related projects.

3.3.3.2- Domestic Public/ Agencies Investing in the Forest Sector

Financing and investments by domestic public institutions vary across countries depending on a number of factors including government policies and funding/budgeting capacity, objectives and priorities, type of forest activities (e.g., production, protection, others), among others.

Over the past several years, led by FAO, a large number of developing countries in different continents have defined, or is about to define and implement, their forest policies and forest development strategies through the **National Forest Programmes** (NFP). The NFP designates the wide range of approaches to the process of planning, programming and implementation of forest activities in a country to be applied at national and sub-national levels, based on a common set of guiding principles.

Since mid-2002 FAO has hosted the National Forest Programme Facility. The Facility is a funding mechanism and an information initiative that recognizes the essential role NFPs in addressing forest sector issues.. The Facility is a partnership between developing countries, donors, FAO and other international organisations to stimulate the participation of stakeholders in NPF processes through knowledge sharing and capacity building. Hosted by FAO, the Facility operates through a multidonor trust fund under the authority of a committee. It provides direct support to countries and information services worldwide. The NFP has provided a global framework to address forestry issues within the context of sustainable development (FAO, 2005).

The funding for those programs comes from both domestic and foreign sources. Domestic sources include the **National Forest Funds** that are mechanisms designed to ensure that some portion of national revenues is set aside for forestry purposes. Their creation and replenishing usually involves the separation of a certain percentage or category of forestry revenues (such as fees, taxes, royalties, forest levies, etc.) from the general treasury and a part of those revenues for reinvestment into the forestry sector. It is understood that these resources may be supplemented by funding from other sources, such as government appropriation or international donors. (FAO, 2001)

A large number of countries across the world have made use of National Forest Funds to support forest investments and the SFM. They include funds for reforestation (e.g., Brazil, Indonesia), concession costs (e.g., Bulgaria), forest production funds in order to meet national wood product demand (e.g., France, Brazil's Carajas Fund, others), payment for environmental services (e.g., FONAFIFO from Costa Rica) protection and conservation (e.g., Funds of Senegal, Mexico Forest Fund), among others. In recent years, the Brazilian government has developed a number of forest financing programs to provide loans to the forest sector (e.g., BB Florestal, PROPFLORA, and PRONAF Florestal), with approved loans of around US$ 100 millions in 2005. These loans are basically to finance the private sector and therefore, as in other cases of domestic public investments/ funds, can in fact be considered as a DDI.

National funds have received support of different agencies and institutions. Some of the positive aspects of such funds are their roles to help meeting the needs for long-term investment; some guarantee to the forest sector against the fluctuations and unpredictability of national budgets; stimulating more effective forest management by government agencies, and allowing for greater oversight of forest spending. Those that advocate against these funds argue that they can trap capital in the forest sector, prevent ideal allocation of government budgets, transmit misleading economic signals for instance weakening the incentive to spend wisely an income, and may increase opportunities for illegal diversion or mismanagement of funds (FAO, 2001).

Information and statistics on investments by domestic public institutions are not readily available as the sources are spread across countries and organisations, and the data is scarce or have not been compiled. In any case there is a clear indication that, for most of the countries, investments of domestic public institutions are concentrated in forest protection and conservation of natural resources.

In some countries, mostly in the past, governments have developed different financing mechanisms for forestry, including fiscal incentives and subsidies to support the forest industry development. Typical examples are tax incentives developed to expand forest plantations in Brazil, Chile and Uruguay. Other examples of domestic public investments are direct investments made by governments in forest plantations (such as in New Zealand and South Africa).

Some of these incentives and subsidies are still in place. Uruguay and Argentina are example of countries with fiscal incentive schemes in operation for forest plantations. In the developed world there are also example of domestic public mechanisms in place. For instance indirect benefits to support small forest owners and forest management through technical assistance, soft loans or other alternatives are available in Finland, Germany and in a number of other developed countries.

3.3.4- Other Financing Sources

FAO has prepared a document on sources for financing SFM. The list of organisations and options is quite extensive and includes international cooperation, national governmental organisations, and a large number of environmental and social Non-Governmental Organisations (NGOs).

An assessment made by the consultant points out that most of the organisations focus financing and funding for SFM on scholarships and other small grants. Among the most relevant ones are the MacArthur Foundation, the Richard & Rhoda Goldman Fund, and the David and Lucile Packard Foundation.

Major NGOs with global activities have contributed with investments in the environment and forest protection worldwide. Among the most relevant NGOs are The Nature Conservancy (TNC) and the World Wildlife Fund (WWF). A brief description of their activities and funding available for forest conservation is indicated as follows:

- TNC - The Nature Conservancy is a leading international, non-profit organisation dedicated to environmental preservation. It works with conservation supporters and partner organisations to create funding for conservation worldwide using a variety of innovative methods including debt-for-nature swaps, funding for public land acquisition and land management through appropriations and public finance campaigns. In recent years, a total of **US$ 32 million** has been allocated under **debt-for-nature swaps** for Peru, Belize and Panama; near **US$ 225 million** under **conservation trust funds**; and **US$ 16 million in resource extraction fees**. Furthermore, for over 10 years TNC has worked in the USA with **public finance campaigns** that have generated a significant contribution for conservation throughout the world.

- WWF – Established in 1961, WWF operates in more than 100 countries and is currently funding around 2,000 conservation projects. The World Wildlife Fund has invested over US$ 1.2 billion in more than 11,000 projects in 130 countries. All these play a part in the campaign to stop the accelerating degradation of Earth's natural environment, and to help its human inhabitants live in greater harmony with nature. WWF actions are concentrated in conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable and promoting the reduction of pollution and wasteful consumption. Worldwide WWF spends in excess of **US$ 40 million every year** seeking solutions to the problems and threats facing the world's forests. In 2005, WWF's Forests for Life Programme chalked up a range of achievements on protecting, managing and restoring forests around the world.. WWF acknowledges its partners' support and looks forward to continued cooperation in 2006.

3.4 – Trends and Perspectives in the Forest Sector Funding/Investments

3.4.1- Main Trends

The flow of capital investment to new producing regions and growing global competition in wood-based commodity products markets has forced a reassessment of long-established manufacturing and marketing strategies in developed countries, particularly in North America (Bowyer, 2004). Considering the fast change and the magnitude of the challenge, industry leaders in these countries are beginning to look beyond marginal change and to consider radical new approaches to ensure future viability.

In the short-run, the emergence of large forest plantations in regions without large-scale forest industry infrastructure may initially be translated to exports of logs. However, over the long run, the availability of fast-growing, low-cost raw materials will almost certainly attract investment capital for the development of the wood industry. With most of the future increase in forest harvest activity and plantation development expected to developing countries, further expansion of wood-based industrial capacity is likely to be concentrated in these regions.

Recent trends in funding flows are indicated as follow:

- Consolidation of **private funding,** as the main source of investments in the forest sector, which is likely to continue in the short- and medium-run. Such investments have been focused on production and commercial forests, with natural forests losing value and importance for private sector investors. However, private financing for forest **protection** has been limited;

- The emergence of **important new players** in wood products manufacturing and consumption – especially China, but also other Asian countries, the Russian Federation, some Eastern European and Latin American countries. In recent years, investments in the forest sector worldwide (FDI and DDI) have been driven towards those regions;

- In the Southern hemisphere and in China, **fast-growing plantations** have been the key trend for the future of fibre procurement and consequently object of major investments. The shift of focus from natural forests to plantations is due both to the greater competitiveness of forest plantations and to environmental concerns. Developing countries such as Argentina, Brazil, Chile, China, Indonesia, and South Africa have become increasingly important as world producers and attracted significant investments (FDI and DDI) to their forest plantation based sectors;

- Existing large-scale and underdeveloped forest resources and increasing timber costs , mostly in Europe makes Russia a country with good opportunity for investments in forestry (PROFOR, 2004). So far, investments in those regions have been mainly driven towards the forest industry that is based on timber from natural forests;

- **FDI** has been rapidly increasing in developing countries, but is **concentrated only in a few countries**. Those countries receive most of the private financing, while low-income countries are largely dependent on ODA (UNFF, 2003). Such a situation is not expected to change significantly in the near future;

- Forest financing towards **forest protection and preservation** and community forests has come primarily from bilateral and multilateral donor agencies and is likely to remain so. Under the most optimistic perspective, investments will remain at the current level. Such agencies, as well as NGOs and private foundations, have been the major sources of investments on forest protection and preservation through grants, donations, funds, projects, and others mechanisms. Only a few donors are willing or have the possibility to increase investment;

- A gap of US$ 27-30 billion in financing needs for the management and expansion of the existing protected forest areas has been estimated. The current global trends, however, indicate that domestic public expenditure and international financing for this area is flat or declining, although there has been a possible marginal increase in private sector investment.

- As a result, agencies and systems associated to **protected areas** are likely to continue suffering from limited budgets, lack of investment in building or maintaining infrastructure, limited resources for training and capacity building, and competition from other agencies for funds; (Molnar, Scherr and Khare; 2004). Major trends on this area are:

    - There is an overall low public spending on protected areas in developing countries, mostly due to lack or scarcity of financial resources. The difference between the developed and developing world in this respect is huge. Developed countries spend between 80 to 100 times more than developing countries, if expenditure per hectare of protected area is taken into account;

    - Trends in ODA funding to protected areas are stagnant. However, ODA has been a major source of finance for forest conservation. According to PROFOR, the multi-donor policy support program, ODA funds have even shown a declining trend;

    - There is a limited scope for expansion of private finance and investment in protected public areas, specially in developing countries;

    - Community's area already are, and could potentially be, the most important source of financing for conservation. Communities need special attention and investments in infrastructure are necessary for community development, for capacity building and other activities.

- Recent discussions within the UNFF have indicated that taking into account profits and incentives, under certain circumstances, **the response of investing on SFM** is worse than investing on other land uses. This is partly due to mechanisms that are missing to compensate environmental and social non-market services to forest owners,. In turn this encourages unsustainable practices, hampers financing for SFM and contributes to deforestation. Moreover, markets for several forest benefits are still missing and there is a lack of exclusive ownership rights (UNFF, 2003). This has improved over the past several years, but the positive impact on finance for SFM has yet to be felt;

- Some trends suggest that SFM has faced a positive change in the financial environment but, unfortunately, nothing has indicated that official flows will reach the needed level of investment in the short- or medium-run. As noted by the UNFF the primary production sector is one of the mostly hit by the decline in ODA;

- The **climate for investments** in a country (represented by a stable macroeconomic, institutional and policy environment as well as intra and inter sectorial factors) are a pre-requisite to attract investments. In this sense, the World Bank, the Inter American Development Bank (IADB) and other agencies have supported countries to develop policies and take actions to improve their investment climate. Many countries, with significant forest resources, have created investment promotion organisations and established other mechanisms such as National Productivity and Competitiveness Councils, aiming at contributing to improve the investment climate. In those countries, DI in the forest sector have increased;

- The UNFF has pointed out that **financing strategies** should concentrate on improving revenue collection, leveraging private investments and creating stable policy and institutional environments, including secure ownership rights and coherent forest policies towards SFM. **Innovative mechanisms** for financing SFM and the forest sector may not be efficient if ownership rights are not secure. Without economic reforms, efforts to leverage foreign investments may not provide the expected results. If the policy environment is insecure and unpredictable, FDI will remain evasive, even if subsidies or other incentives are present. Many of these prerequisites are beyond the control of the forest sector. However, in view of the common interest of most sectors, the issue calls for a holistic approach and recognition of inter-sectorial implications. It has become increasingly important to link forestry with other economic sectors in terms of investments and development strategies and to demonstrate the contribution of forests to poverty alleviation, social and economic development and environmental protection (UNFF, 2003). In other words, innovative mechanisms are highly dependent on the investment climate;

- A major problem facing financing for **SFM** can be linked to the basic problem of market and policy failures that make SFM unprofitable or not sufficiently profitable. Such a problem has become critical when dealing with natural forests, mostly with tropical forests, located in developing countries. Moreover, because of perverse fiscal instruments and other incentives, unsustainable practices are often more profitable, resulting in more deforestation and forest degradation and tying up scarce financial resources. (UNFF, 2003)

3.4.2- Funding/ Investments Perspectives

Based on the extensive review carried out by the consultant the major perspectives on forest funding and investments are identified and described as it follows:

- **The total investments in the forest sector** are expected to continue at the same level observed in the recent past. DI (private sector - DDI and FDI) will continue to be responsible for the largest share (about 90%), and ODA will likely have its importance gradually reduced. Innovative financing approaches may become a focus of investments and contribute to fill in the gap left by the reduction on ODA SFM funding;

- **DI in the forest sector** will likely maintain its current level of investment, but will probably be redirected towards Southern hemisphere countries, given their comparative advantages (e.g. high forest productivity, low labour costs, available resources, others). The new class of forest assets (timberlands) will continue to gain importance, and TIMO's will increase its role in developed and developing countries. TIMO's will mostly be concentrated in forest plantations, and will be predominating FDI from the USA (and a few other developed countries) towards Latin America (Argentina, Brazil and Chile) and Asia/Oceania (New Zealand, Australia and China). Investments by TIMO's in most cases do not represent, in principle, investments in forest base expansions, instead the control of already existing forest resources. Anyway, in view of reduction in investment options, TIMO's may be driven to greenfield forest projects, therefore contributing to expand forested areas (primarily fast growing plantations);

- **Conservation easements'** importance is growing, mostly as a result of the new approach adopted by TIMO in USA when dealing with forestlands as a separate asset. The environment easements and other forms of maximising investments returns (such as land appreciation) already are and will grow in importance when structuring forest funds and forest projects investment decision;.

- **Forest products demand** will grow, but at a lower rate than other relevant commodities, especially considering solid wood products. On the other hand investments and gains in productivity in forest plantations will tend to be balanced between supply and demand for raw material, while at the same time some forest products will tend to be replaced by substitutes, such as aluminium, plastic, and steel. This, to some extent, will limit the growth of DI investments in commercial forest and industry. As a result of a number of factors, investments in the tropical timber industry (and therefore DI in SFM of natural tropical forests) will gradually decline. This is a critical issue in view of the importance of DI and the continuing reduction of other funding and finance options;

- Most of the future **investments in the forest industry** will continue to be concentrated in the pulp and paper segment. To a lesser extent, but also important, investments will continue to flow to the reconstituted wood panel segment, mostly for MDF and OSB production.

- **DI in the pulp and paper segment** in the short- and medium-run will be driven to maintain the growth in production observed in the past several years. DI will be concentrated in countries with low cost of wooden raw-material and high market potential, as for instance Brazil, China, Russia and some Eastern European countries. The perspective is that FDI prevails from the USA towards Latin America and from Western Europe towards Eastern Europe and Russia. The expectation is that the international trade may grow strongly in the coming years for forest product exports from Eastern European countries, Russia and Brazil.

- **M&A in the forest industry** will likely continue in the future, but at a slower pace than observed in the past, given the changes in the world economy and competition regulations. The latter will be in the short-run a strong barrier for the M&A. As for newsprint, for instance, the top five world producers already account for 85% of the production capacity in Western Europe. In the case of magazine (couche) paper, the top two world producers control 50% of the European market. Within this context, it is important to consider that regulation of the competition certainly will call the attention of European companies for investments outside the region, primarily in Asia and in South America (IADB, 2004).

- The **Global Forest Vision 2050** (PROFOR, 2004) study predicts that by the middle of the XXI century 40% of global forests will be managed primarily for the protection of biodiversity and other forest environmental services. Although such perspective exists the consultant points out that such percentage could be reached only if sufficient funding and financing are allocated for this purpose. This is indeed a challenge for governments and agencies engaged with forest protection, especially when dealing with developing countries. It seems clear that the area for protection of biodiversity and other environmental services will grow faster in developed countries, as finance is easier and existing commercial forests lose their competitiveness.

- Most of the expected growth on **industrial roundwood demand will be in pulp and paper**. While much of the softwood needed for pulp and timber will come from Canada's and Russia's natural forests, increasing volumes of hardwood fibre will come from private-sector-financed plantations in countries of the Southern hemisphere and from China. Such trend creates increasing opportunities for smallholders and local communities to play a significant role in pulpwood supply, and will increase the demand for finance;

- There is a low expectation that proper **incentive mechanisms to invest in SFM**, particularly for natural tropical forests, will be available in the next years. Forests will continue to be less competitive than other land uses as long as externalities are not accounted for. Although by definition SFM should be self-financing the UNFF in its 3rd Session (2003) highlighted that the basic questions in financing remain the same: How can existing financial flows to forestry be channelled to sustainable forestry practices and how can additional investments in SFM be promoted? Since SFM needs to be a profit-seeking activity, the question on how to ensure the profitability and self-financing of SFM will continue to be debated;

- As stated in the **Forest Investment Forum**, forest health in wealthier countries is improving, the demand for forest products and for environmental services from forests is increasing in developing countries, in parallel with increasing demand for agricultural land. Such aspects highlights the need of different types of investments and funding for different countries and activities.

3.5 – Critical Factors Affecting Forest Sector Funding/Investments

The review carried out in this study points out that DI, particularly DDI, is by far the most relevant source of funding and finance for forestry/SFM and forest-based sector. Over the years DI have generally contributed with over 90% of the total investment, amounting to around **US$ 60 billion per year**.

The trend analysis of this study also pointed out that the relative importance of DI is growing, while ODA is declining. Innovative funding sources are expected to become an option to replace the declining ODA, but there are still several problems to be solved and it will take some time before such alternative becomes significant.

On the other hand, DI will most probably be kept at the current level, and will likely be concentrated in commercial forest plantations and in the pulp and paper industry. Thus, funding SFM of natural forests, investments in the solid wood industry and investments to compensate deforestation and forest degradation will remain largely unsolved. This will be a problem especially for natural tropical forests, mostly located in developing countries that have few funding and finance options available.

Taking into consideration that DI in the forest sector (private sector investments) represents estimated 93% of the total investments, the **total global investments** reach **US$ 64 billion per year**. Out of this total estimated **US$ 18 billion per year** is Direct Investment in forests (SFM), with the remaining (**US$ 46 billion per year**) invested in forest industry and trade.

Assessments on needed financing resources to implement SFM are not precise and the estimates vary depending on the source of information. As previously presented, taking UNCED as a basis, a total of **US$ 31 billion per year** would be required for SFM. Such amount increases to **US$ 69 billion per year** when compensation for deforestation and forest degradation are included.

Regardless of the precision on the estimates of capital resources needed to achieve SFM, it seems that the total current investments in forests (US$ 18 billion) is far too low, and represents less than 30% of the total necessary needed investment estimated by UNCED.

More critical is the fact that investments (predominantly DI) are mostly concentrated in commercial forests and the trend points out to a greater allocation of investment in forest plantations. Such a fact, together with the reduction in ODA and the slow development of innovative mechanisms represent serious problems for financing SFM of natural forests, especially for natural tropical forests and other forests in developing countries.

There is a number of **critical factors** involved with the increase of funding/investment flows to forestry and forest-based sector, as well as the efficient allocation of the available funds. Below some of the major factors are highlighted:

- **Climate for Investments**

Improving the climate for investments, particularly in developing countries, is a critical factor for attracting DI (either FDI or DDI) for the forestry and forest-based sector. The key factors affecting investments are those external (supra and inter sectorial factors) and internal (intra) to the forest sector. Attention should be given primarily to:

- Supra Sectorial Factors – GDP, interest rate, exchange rate, international trade, political stability and government transparency, and taxes;

- Inter Sectorial Factors – Economic structure, social infra-structure, licenses and permits, labour, access to credit, judicial security and law enforcement, treatment of capital, agriculture policies, and restrictions to forest resource use;

- Intra Sectorial Factors– Forest resources, support to the forest-industry business, domestic market, forest vocation land, and adverse factors.

IADB has recently developed an index to measure the investment climate in the forest sector of its member countries. The so-called **Forest Investment Attractiveness Index (IAIF)** measures the business climate for investments in sustainable forest enterprises and facilitates the analysis of the problem. In addition, IADB has developed a methodology to improve the investment climate. The methodology known as **PROMECIF- Process to Improve the Business Climate for Forest Investment** is an option to countries willing to increase DI, the major alternative at the moment, in the forest sector.

- **Critical Aspects of Financing SFM**

Financing SFM has been recognised by UNFF as a critical question. The three main challenges facing financing for SFM, according to the UNFF (2003) are: (a) how to increase financing to meet the requirements of transition to SFM; (b) how to channel the existing financing from unsustainable practices to sustainable ones; and (c) how to make SFM profitable and lessen the need for additional external financing.

Key factors that are associated with the low revenues generated from SFM for investors, and consequently with the lack of sufficient incentives for investments, include: externalities, common access (property right issues), the public good nature of several forest benefits, and inefficient and inadequate rent collection from public forests. Moreover, the failure of the sector to improve its image and to highlight cross-sectional linkages have also contributed to decreasing ODA flows and to an image of SFM as a low-profit and high-risk investment opportunity. (UNFF, 2003)

- **Risks and Uncertainties**

Reducing risk and uncertainty that arise particularly from the long time-period involved in forestry and SFM investments are an important action to increase funding and financing Suggestions for minimising and mitigating risks include creating more flexible financing mechanisms and borrowing conditions, assessment of the project risks, provision of technical assistance, increasing institutional integration, proper law enforcement, clear and efficient regulations. Most of these aspects have close link with the investment climate.

- **Transaction Costs**

Transaction costs are one of the largest constraint and a major critical factor to investments worldwide. Lowering these costs is a way to improve the climate for investments and for business operations across a region. Transaction costs of SFM have grown in the past several years and in many countries the responsibility for financing those costs have been passed by governments to the private sector. In addition, other costs and factors have gained importance in recent years, including the cost of certification (Tomaselli, 2001).

The ad hoc expert group that gave advice on finance before the UNFF4 has also stressed the importance that multilateral and bilateral financial and development institutions working with SFM take prospective actions to reduce financial costs and make disbursements and delivery of ODA more flexible. Different studies have pointed out ways to reduce transaction costs of investing in a region that includes investment promotion programme and undertaking investment facilitation measures.

- **Making Funding and Financing More Effective**

Adjusting the donor's and the recipient's priorities has been point out as a critical factor to make funding and financing more effective for forestry and the forest sector. There is a number of required actions that include the need for 'alignment', making donors of funds to listen more often to recipients, and mutual accountability as investments in some forest projects may be difficult to sustain or produce systemic effects after the donor effort has finished (Manning, 2005);

- **Inadequate Rent Capture**

As discussed in the 3rd Session of the UNFF, inadequate rent capture decreases government revenues, poses a concealed subsidy, and increases inefficiency. Among other aspects, low rent capture may indicate improper accounting of forest resources and incomplete and poor forest valuation.

Institutional conditions and market imperfections, such as lack of competition and incomplete information, as well as complicated rent collection procedures are also issues to examine. Low rent capture is often associated with illegal activities that reinforce forest degradation (UNFF, 2003).

- **Need for Innovative Financing Mechanisms**

A number of international organisations and countries have been developing innovative forestry financing instruments and mechanisms in recent years. To different extent, these mechanisms have shown some degree of success becoming quite promising tools to be properly applied and/or adapted to different regions and conditions.

Developing these mechanisms, as a complementary source of funds to support SFM, is of outstanding importance, especially in cases where biodiversity, water conservation and other environmental and social values are key components. Richards (1999), cited by Verweij (2002) classified (innovative) financial incentive mechanisms into four main categories. For all four categories, as listed below, a distinction is made between domestic and international incentive mechanisms:

i. Transfer payments involving costs or benefits transfer between stakeholders, including fiscal market-based instruments and international transfer payments;

ii. Promotion of market or trade-based approaches;

iii. Promoting and influencing private or public investment flows; and

iv. Property rights approach in which property and utilisation rights are created, clarified, or modified.

According to Costa et al (1999), innovative financing mechanisms tend to fall into one of two categories. The categories are:

i. Designed, applied and developed for a specific purpose (often to remove a specific investment barrier) related to the financing of environmental projects and enterprises; and

ii. Conventional financial vehicles used widely in other sectors but that have been adapted and applied to the specialized requirements of SFM or other emerging investment areas.

These mechanisms are also referred to as innovative financing and incentive mechanisms (IFIM), which are defined *as "mechanisms, which result in new or increased finance and/or influence the flow of private costs and benefits in a way that stimulates sustainable forestry"* (Richards 1998; cited by Costa et al, 1999). Such definition highlights that innovative financing mechanisms are often designed to address environmental externality problems. Costa et al (1999) studied eighteen **innovative financing mechanisms** selected to be indicative of the available and emerging investment vehicles for SFM. They included the mechanisms categorized as follow:

i. Direct Commercial Financing Mechanisms: portfolio equity instruments; public-private instruments; and private sector forestry investment funds;

ii. Direct Concessionaire Financing Mechanisms: national environmental funds (NEFS); debt-for-nature and development swaps; conservation trust funds (CTFS); biodiversity venture capital funds; small- and medium-scale enterprise credit lines; micro-credit; and small targeted grants;

iii. Market Development Mechanisms: forestry-based carbon offsets; bioprospecting fees; water resource use charges; tradable development rights (TDR); and marketable forest protection and management obligations; and

iv. Structural development mechanisms: fiscal instruments; national forest funds; and environmental performance bonds.

Verweij (2002) also carried out a study on innovative financing mechanisms for conservation and SFM of tropical forests. His study indicated the following major mechanisms: (i) financing biodiversity conservation; (ii) financing carbon sequestration; (iii) financing water services (private mechanisms, private-public mechanisms, and public mechanisms); (iv) bioprospecting; and (v) combination of services.

As for the latter, the author highlights the Payment for Environmental Services (PES) program developed in Costa Rica. Such program includes monetary compensation by the Costa Rican society to private landowners primarily for the maintenance of natural forests and for the establishment of forest plantations.

A thorough assessment of these mechanisms and their capacity to generate funds and to finance forest projects has not been carried out, and worldwide monetary figures are yet to be assessed.

- **Other Aspects**

A number of additional critical factors need to be taken into account in order to increase funding/investment flows. They include:

i. Cultural and social factors, primarily for FDI;

ii. Properly valuing forest resources;

iii. Eliminating perverse subsidies (such as low stumpage prices due to inefficient rent collection and trade restriction) and disincentives;

iv. Combating illegal logging;

v. Eliminating bans and tariffs on legal forest products trade; and

Adverse policies in other sectors; for example providing subsidies to agriculture and reducing the relative profitability of forestry.

4 – CONCLUDING REMARKS

This study is a review on funding and finance flows for forestry and the forest-based sector worldwide. Its main purpose is to support UNFF in the discussion of the topic.

Based on the information available and on the discussion presented in the previous chapters, the consultant highlights the following aspects:

- **Needs for Investments in Forestry/Forest-Based Sector**

  - The difficulties involved with data collection, compilation and analysis of information of forest investments worldwide are widely recognised. Existing surveys of funding and investment flows to the forestry and the forest-based sector worldwide are outdated with a few concise and informative reviews published after 2002;

  - There is no agreement on the amount invested in forestry and in the forest-based sector worldwide every year. However, an estimate of the total global investments amounts to around US$ 64 billion per year from all sources (DI, ODA, and others), with US$ 18 billion in upstream forests and SFM and about US$ 46 billion in downstream forest-based industry and trade;

  - Estimates of the financial needs for forestry and SFM worldwide points out to between US$ 33 billion and US$ 70 billion, depending on whether environmental externalities (e.g., compensation for deforestation and forest degradation) are included.

- **Investments in Forestry and Forest-Based Sector**

  - The major type of investment in forestry and in the forest-based sector is Direct Investment (DI). Under this category Domestic Direct Investment (DDI) predominates with over 90% of the total investments. The remaining investments (less than 10%) come from FDI. DI have increased after 2001 as result of the improvement of the internal climate for investments;

  - DI concentrates mostly in developed countries and on forest plantations and related downstream industrial processing and trade projects. This has been a result of the nature of investments with focus on economic returns. Out of the total investment, around 30% is estimated to be driven towards SFM (forestry) and the remaining 70% to forest-based industries and trade;

- Foreign Direct Investments (FDI) concentrate in the improvement of the economic return of trans-national corporations, mostly from the pulp and paper segments, and in Mergers and Acquisitions (M&A). Trends on the latter have been on investments in the Southern Hemisphere (e.g., Brazil, Uruguay, Chile, and New Zealand). Information on the percentage of FDI actually applied in SFM is scarce;

- Official Development Assistance (ODA) has been declining over the past several years. A brief analysis of the investments from a selected group of major ODA donors (i.e., WB, GEF, and IADB) has indicated their low average investments in forest-based projects (between 3-5% of their total global investments). The percentage is lower (1%) considering OECD statistics on total ODA investments;

- National public investments have been limited in developing countries. Example of some innovative funding include some National Funds such as the Costa Rican FONAFIFO fund for Payment for Environmental Services (PES), the Mexican forest fund, and past initiatives for forest plantations in various Southern Hemisphere countries.

- **Critical Issue on Funding SFM**

  - Lack of funds has been a critical matter especially for developing countries and tropical natural forests. Investments in SFM are below the needs (estimated to be around only 30%). This is linked to the fact that the private sector is not willing to assume the high associated risks, the low returns, the increasing transaction costs, and internalisation of environmental costs.

- **Alternatives Under Discussion**

  - There has been a strong need for the international community to continue the discussion of the issue of investments / funding for forestry and the forest-based sector in its agenda;

  - Several countries and international organisations throughout the world have been developing some innovative financial mechanisms and instruments for SFM in recent years. To different extent these mechanisms have shown some degree of success becoming promising tools to be properly applied and/or adapted to different regions and conditions;

A number of options have been suggested in recent years to overcome the problem of lack of funding in forest activities worldwide. For instance, the Oslo Workshop on Financing SFM has discussed ways of increasing financial resources from existing and prospective sources. Besides discussion on mechanisms such as the Global Environment Facility (GEF), the Clean Development Mechanism (CDM) of the Kyoto Protocol, and improving the effectiveness and efficiency of available resources the workshop has also given attention to the proposition of a Global Forest Fund (GFF).

The major aspects related to the financing and investments in SFM and the forest-based sector need to be discussed and addressed in specific international fora, such as the UNFF.

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