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**DEVELOPMENT, INVESTMENT AND ENVIRONMENT: IN SEARCH OF SYNERGIES**

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## EXECUTIVE SUMMARY

### *Mainstreaming environment into financial flows*

Financial flows from official assistance and private investment offer opportunities for development in many poor countries of the world. In order for this development to be sustainable, effective policies and tools at all levels are needed to reap the growth benefits while minimising negative environment impacts.

Total private flows to developing countries reached peak levels in the early 1980s. Recent changes in the composition of these flows suggest that their developmental benefits could now be far greater. Direct investment has become the most significant element of private flows to developing countries, and for a period of six years (1996-2001) outstripped ODA as a source of external finance. By contrast, bank lending, which adds to debt burdens, is much lower than 20 years ago. However, it is generally recognised that more private investment is needed to meet developing countries needs.

The World Bank's Guidelines and Safeguard Policies often serve as a baseline against which projects are screened for environmental viability. These guidelines seem to be applied for most other forms of international project financing. This diffusion of World Bank environmental procedures may be a step towards a harmonisation of public and private, financial and corporate, multilateral and national practices, with beneficial effects on the cost, speed of aid and investment delivery, and simplification of donor and host country administrative tasks linked to project-based activities.

Most ODA financed projects are now subject to some form of environmental impact assessment. DAC members have put in place policies which require projects to be screened and their potential environmental impacts assessed, before a decision on financing is taken.

In the last years, a new approach for concessional lending and aid for debt relief has emerged, and there has been a shift from project financing to structural adjustment lending. Traditional environmental assessment tools designed to evaluate tangible impacts on local environments do not seem well suited to assess the environmental impact of structural adjustment loans. More adequate assessment mechanisms would need to be developed.

### *Investment and environment: the domestic policy context*

To spur economic growth, development policies need to attract and retain investments. Capital is the engine for growth. However, adequate attention to related environmental elements is a necessary condition for sustainable development. Conversely, sound environmental policies are an important driver to attract capital. A solid environmental framework reduces investment risks in all its aspects: financial, legal and reputational. Hence, it is important to mainstream environment in development policy processes.

The domestic policy context, directly or indirectly, shapes the scope and environmental performance of foreign investments. Adequate environmental regulation and enforcement mechanisms, as well as local human and financial capacity, and the existence of a local business sector are key. Contrary to what might

be expected, companies may seek investments in locations where environmental laws and enforcement are strong.

Having domestic environmental policies and regulations in place in host countries does not always necessarily improve the environmental performance of investments. Reforms aiming at adequate pricing of natural resources may also be difficult to implement without aid to help smooth the transition towards full reform.

#### *New forms of co-operation*

Co-operation between different stakeholders - governments, business, civil society - is becoming increasingly important. A variety of mechanisms have developed over the past years to promote co-operation. These include public-private partnerships and the support of development agencies to strengthening corporate responsibility of the domestic business sector in developing countries. In addition, the Clean Development Mechanism established under the Kyoto Protocol, can help facilitate investments supporting implementation of the Climate Change Convention in developing countries. To ensure successful CDM projects, co-operation is needed between both public and private entities.

#### *Synergies between investment, development and environment*

Private flows are by far the largest source of total foreign financial flows to developing countries. This is reinforced by the changing role of ODA from the main source of project finance to facilitating private investment. In order to better articulate development and environment objectives, emphasis should be put on building the appropriate national capacities to manage incoming financial flows through target definition, regulation, rules enforcement, stakeholder engagement, etc. Development co-operation agencies can support this process by, *inter alia*, assisting in developing the necessary investment climate to attract private investment in financially risky areas, such as privatisation of energy or water sectors and encouraging corporate responsibility among multinational and domestic enterprises.

**List of acronyms**

CRS:	Creditor Reporting System
DAC:	Development Assistance Committee
ECA:	Export Credit Agency
FDI:	Foreign Direct Investment
GDP:	Gross Domestic Product
GEF:	Global Environment Facility
GHG:	Greenhouse Gases
GNI:	Gross National Income
HIC:	High Income Country
IBRD:	International Bank for Reconstruction and Development
IDA:	International Development Association
IEA:	International Energy Agency
IFC:	International Finance Corporation
IMF:	International Monetary Fund
LDC:	Least Developed Countries
LMIC:	Lower Medium Income Country
MIGA:	Multilateral Investment Guarantee Agency
MNE:	Multinational Enterprise
ODA:	Official Development Assistance
ODF:	Official Development Finance
OLIC:	Other Low Income Country
OOF:	Other Official Flows
PRSP:	Poverty Reduction Strategy Papers
SAL:	Strategic Adjustment Loans
SECAL:	Sectoral Adjustment Loans
UMIC:	Upper Medium Income Countries
UNCTAD:	United Nations Conference on Trade and Development
UNEP:	United Nations Environment Program
UNIDO:	United Nations Industrial Development Organization

## 1. Introduction

At its meeting in May 2004, the WPGSP agreed to pursue work on the synergies between official development assistance (ODA), private investment and environment [ENV/EPOC/GSP(2004)5]. This work would be a contribution to a broader project by the Investment Committee and the Development Assistance Committee on ODA and investment synergies, within the framework of the OECD Initiative on Investment for Development. The results of that project, including policy guidance to donors on mobilising investment for development, will be presented to the OECD meeting of the Council at Ministerial level on 3-4 May 2005.<sup>1</sup>

The WPGSP agreed that the project covering the environmental angle of the development assistance-investment synergies work would aim at addressing two broad groups of questions:

- How, and to what extent are environmental considerations shaping the different types of financial flows from OECD countries to developing countries? Through which tools, mechanisms and institutions? How do these flows interact in their environmental aspects? Further, within the range of environmental issues being addressed, are greenhouse gas emissions considered and, if so, how is this dimension of environmental performance being integrated in investment flows to developing countries?
- Which conditions are required in recipient countries to ensure that such flows are able to contribute to environmentally sound investment, and thereby to sustainable development?

The first group of questions addresses issues related to the *supply* side of financial flows (donors and investors), the second one addresses issues related to the *demand* side of such flows (recipients).

The report is structured as follows. After this introduction, it provides an overview of the main trends in financial flows to developing countries (official flows and private investments) and their environmental dimensions. It then examines the conditions attached to these flows in order to ensure that the environmental performance of the projects to which they are destined is taken into account (“supply side”). Next, it provides an overview of the domestic policy context (“demand side”), and the necessary conditions to ensure better environmental performance of investments. The report finishes with a summary of the main findings and suggestions of further steps to strengthen linkages between investment, development and environment.

Case examples focus on a few large and rapidly industrialising developing countries, and in particular, on their energy sectors. China, Brazil and India are recipients of significant amounts of international financial flows. They are large countries with rapidly expanding economies along with increased demand for energy. At the same time, they face pressing local environmental problems such as human health and productivity costs due to urban pollution and losses in crop productivity due to regional air pollution. Outside the OECD, these countries are among the largest and most rapidly growing contributors to

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<sup>1</sup> "Mobilising Private Investment for Development: Policy Lessons on the Role of ODA"[C(2005)61]. The background material related to the report to Ministers has various Annexes, including one on “ODA, Investment and Sustainable Development: the Example of Environment” [DAF/INV/WP(2004)4/ANN6], which draws largely on the previous version of this report by the WPGSP. Two other Annexes, one on “Trends in Aid and Private Investment for Development” [DAF/INV/WP(2004)4/ANN1/REV1] and one on “Encouraging Public-Private Partnerships in Developing Countries” [DAF/INV/WP(2004)4/ANN/REV1] are also of relevance for this study, and selected parts of these reports have been incorporated here.

greenhouse gas emissions. Clearly the environmental performance of investments in their respective energy sectors has a significant influence not only on local and regional areas, but also implications for the global environment.

The report is based on data from the DAC/CRS statistical database, and draws on existing literature. Information has also been gathered through interviews with experts and practitioners. To illustrate the relationship between environmental management and performance (as reflected in reported changes on emissions of global pollutants), a special survey has been commissioned. The main findings of the survey are summarised in section 3, the full survey is issued as a separate Annex [ENV/EPOC/GSP(2004)14/ANN].

This work contributes to the implementation of the OECD Environmental Strategy for the First Decade of the 21<sup>st</sup> Century, in particular its objective 5: “Global Environmental Interdependence: Improving governance and co-operation.” It also contributes to deepening analysis of the linkages between investment, development and environment in a broader policy context, which includes the following recent milestones:

- The Millennium Development Goals and Targets, together with 48 indicators for monitoring progress, derive from the *Millennium Summit Declaration* that was signed in September 2000 by 189 countries. They include goals to eradicate extreme poverty and hunger (goal 1); ensure environmental sustainability (goal 7); and develop global partnerships for development (goal 8).
- The *Monterrey Consensus*, adopted at the 2002 International Conference on Financing for Development, calls for developing countries to implement domestic policies in order to raise the effectiveness of aid. In return, developed countries reaffirmed their commitment to increase the level of aid to 0.7% of gross national product.
- The Plan of Implementation adopted at the 2002 *World Summit on Sustainable Development*, which endorsed partnerships involving civil society, the business sector and governments as an effective tool to promote sustainable development.

## **2. Trends in financial flows to developing countries and their environmental relevance**

This section describes several aspects of financial flows to developing countries - foreign private investment and official flows.<sup>2</sup> It first provides an overview of trends in financial flows, and then describes attempts to assess the environmental relevance of such flows. It draws on a selected range of sources and is not intended to be a comprehensive review.

### ***Main trends in financial flows***

Investment available for development includes public and private, foreign and domestic sources. In developing countries, the amount of foreign direct investment (FDI) from industrialised countries relative to domestic financing is low, estimated at about USD 50 billion compared with domestic investment of about USD 1 trillion in 2002 (OECD, 2003a).

Through most of the 1990s, private financing represented an increasing share of foreign capital investment in developing countries. Since the late 1990s, there has been increased volatility in FDI and bank lending

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<sup>2</sup> Official aid to transition countries is excluded from the scope of this report.

in response to regional financial and currency market upheavals. By comparison, official flows were relatively stable in absolute terms.<sup>3</sup> Between 1980 and 2002, ODA remained a more stable source of foreign capital for development despite its relatively stagnant evolution. Yet looking at overall ODA flows can mask high volatility per recipient country since aid is often linked to donors' strategic considerations (Alesina and Dollar, 1998).

Uncertainty in aid flows has a negative impact on growth (Lensink, *et al.*, 2000). It also makes it difficult to build and maintain national frameworks that adequately incorporate long-term considerations such as environmental protection. It is therefore a priority for donors and recipients to take a multi-year approach to funding and delivery.<sup>4</sup>

The Monterrey Consensus states that "ODA plays an essential role as a complement to other sources of financing for development, especially in those countries with the least capacity to attract private direct investment". It further states that "recipient and donor countries, as well as international institutions, should strive to make ODA more effective" and that there is a need to "promote the use of ODA to leverage additional funding for development, such as foreign direct investment, trade and domestic sources."<sup>5</sup> Donor agencies recognise the importance of mobilising private flows. Examples include the Global Environment Facility (GEF), which promotes "leverage" as a basis of funding operations<sup>6</sup>.

Recognising that ODA alone cannot meet all development needs, and that donor activity level is far below the level agreed in the Monterrey Consensus, ODA is seen more and more as a catalyst for private sector involvement, be it foreign or domestic. This view is supported by the characteristics of FDI as a potential conduit for technology transfer and as a contributor to economic growth and long-term commitment (OECD, 1998).

Figure 1 presents trends in external resource flows to developing countries from the Development Assistance Committee's (DAC's) 22 member countries between 1980 and 2003, expressed as a share of DAC members' total gross national income (GNI).<sup>7</sup> The ODA and OOF data (see Boxes 1 and 2 below for

<sup>3</sup> Relative to gross domestic product in OECD countries (donors), ODA declined in this period, with a slight upturn in 2002 (OECD 2003b).

<sup>4</sup> A priority action for the bilateral donor community set out in the OECD Development Assistance Committee Guidelines for Poverty Reduction is to "adopt, to the greatest extent possible, a multi-year timeframe for poverty reduction programming and funding as a complement to multi-year partner government fiscal planning and budgeting" (OECD, 2001a).

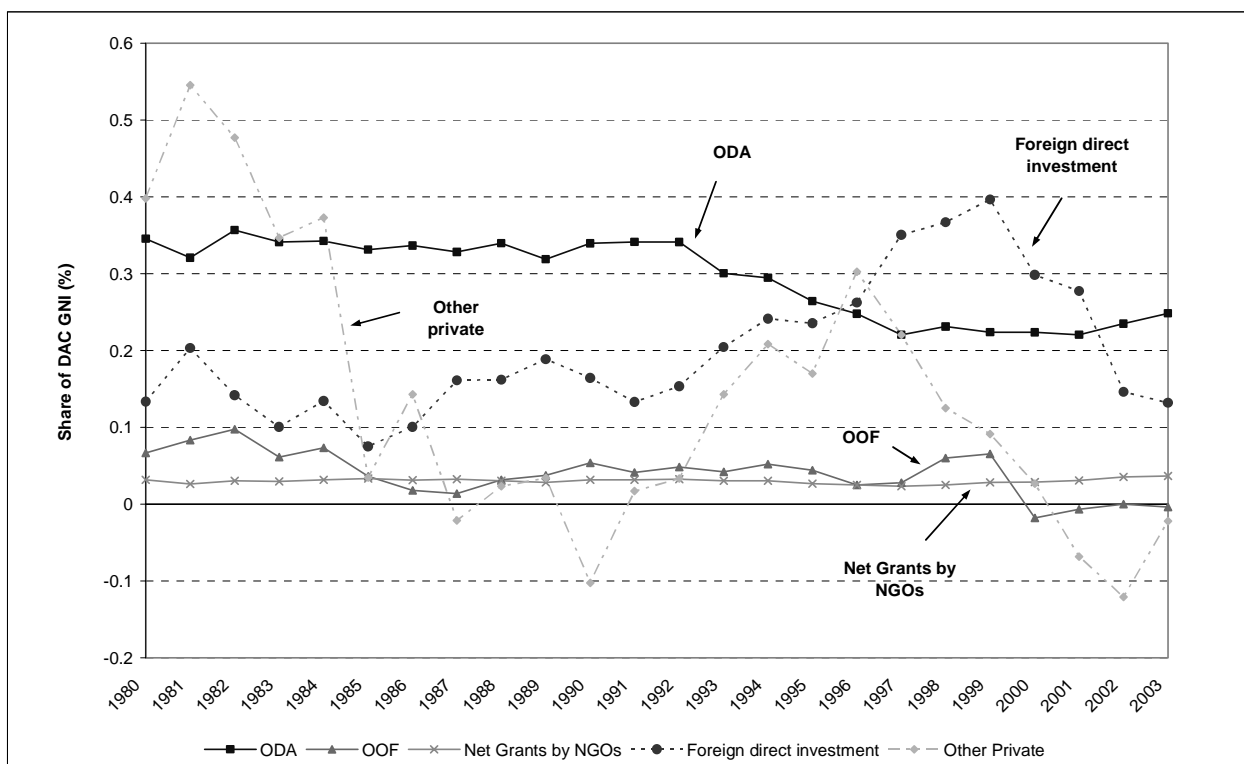
<sup>5</sup> Monterrey Consensus, paragraphs 39 and 43.

<sup>6</sup> "In seeking to maximize global environmental benefits, the GEF will emphasize its catalytic role and leverage additional financing from other sources" (GEF Operational Principles, <http://www.gefweb.org>). An example of a successfully leveraged activity: "Market Transformation on Energy Products" a bundle of eight carbon emission reduction projects attracted USD 430 million over an initial USD 90 million GEF involvement, and achieved an average price abatement of USD 1, through approaches targeted to reduce demand side (consumers habits) and supply side (technology entry) barriers for energy-efficient products (GEF lessons notes 13, June 2002).

<sup>7</sup> Figure 1 and the related explanatory text, as well as Annex 2, are drawn from "Trends in Aid and Private Investment for Development" [DAF/IV/WP(2004)4/Ann1/REV1]. It does not include loans with a maturity of less than one year, military credits, transfer payments to individuals or remittances. No flows to transition countries are included. Private flows shown in this chart are based on DAC members' reporting to the annual DAC Questionnaire on total official and private flows and cover members' holdings in private long-term assets in developing countries held by residents of the reporting country. They exclude any flows to countries in transition as well as any South-South co-operation.

definitions of terms) are shown as “net”, with repayments of concessional and non-concessional loan principal being deducted from the “gross” disbursements. Similarly, the FDI inflows are “net” in the sense that they are the balance between foreign enterprises’ inward and outward capital transactions with affiliates in developing countries. These were partly offset by FDI outward investment by enterprises domiciled in developing countries, but many of these outflows were autonomous transactions unrelated to the inward investment and could have been financed by any of the other type of external financing or domestic savings. Annex 2 completes this figure. It provides an overview of total net flow of long-term financial resources from DAC countries to developing countries and multilateral organisations (by type of flow).

**Figure 1. DAC member countries' resource flows to developing countries**



ODA has exceeded private capital flows in most years over the last few decades and, as Figure 1 shows, it has been the least volatile component of capital flows to developing countries, since it expresses government programmes for development that are largely independent of the individual decisions of economic actors. While Figure 1 shows aggregate flows to all developing countries on the DAC List, the preponderance of ODA over FDI holds mainly for low-income countries. In middle-income countries, FDI is often higher than ODA. Medium-term trends in ODA volume are determined in part by underlying support for development – which has increased with the results-orientation given by the Millennium Development Goals (MDGs) - and economic conditions in donor countries. Changed strategic priorities following the collapse of communism and fiscal consolidation in DAC member countries led to the major fall in ODA between 1992 and 1997. The subsequent upturn coincided with an emerging consensus on the broad development agenda around specific goals for 2015.

Total private flows to developing countries, as a share of DAC members’ GNI, reached peak levels in the early 1980s. However, recent changes in the composition of these flows suggest that their developmental

benefits could now be far greater. Direct investment has, globally for developing countries, become the most significant element of private flows and for a period of six years (1996-2001) outstripped ODA as a source of external finance. By contrast, bank lending, which adds to debt burdens, is much lower than 20 years ago. The sharp fall in “other private flows” to developing countries in the early 1980s reflects the collapse in international bank lending following Mexico’s announcement in 1982 that it was unable to meet its debt service obligations. There was a similar retrenching following the financial crisis in Asia in 1997.

Within these overall trends, the mix in sources of external financing can be very different for individual developing countries. It is often asserted that “almost all of the ODA goes to the poorest countries while almost all of the FDI goes to the middle-income countries”. This is clearly an oversimplification, although FDI does tend to be relatively more important in middle-income countries.

### ***Foreign direct investment and other private investment flows***

Foreign private investment flows include international bank lending, public debt, portfolio equity holdings and foreign direct investment (Box 1). Unfortunately, there is a lack of data available on private investment flows to developing countries (some data are available from central banks, but they lack reliability and consistency).<sup>8</sup> For the moment, data which would allow measurement of the environmental performance of private flows are not available either.

#### **Box 1. DAC definitions of private flows**

- Foreign Direct Investment (FDI): Investment made to acquire or add to a lasting interest in an enterprise in a country on the DAC List of Aid Recipients. "Lasting interest" implies a long-term relationship where the direct investor has a significant influence on the management of the enterprise, reflected by ownership of at least 10% of the shares, or equivalent voting power or other means of control. In practice it is recorded as the change in the net worth of a subsidiary in a recipient country to the parent company, as shown in the books of the latter.
- International Bank Lending: Net lending to countries on the DAC List of Aid Recipients by commercial banks in the Bank of International Settlements reporting area, *i.e.*, most OECD countries and most offshore financial centres, (Bahamas, Bahrain, Cayman Islands, Hong Kong, Netherlands, Antilles and Singapore), net of lending to banks in the same offshore financial centres. Loans from central monetary authorities are excluded. Guaranteed bank loans and bonds are included under other private or bond lending.
- Bond Lending: Net completed international bonds issued by countries on the DAC List of Aid Recipients.
- Other private flows: Mainly reported holdings of equities issued by aid recipient countries, and bank loans which in this context are included with guaranteed export credits.

*Source* : Glossary of Key Terms and Concepts, OECD 2002e.

Foreign direct investment, because of its alleged stability (Lipsey, 1999; Nunnenkamp, 2001), is widely seen to be the most suitable form of foreign private flows to dovetail with public assistance and domestic

<sup>8</sup> On the difficulties in compiling FDI data and interpreting what is available, see *Foreign Direct Statistics: How Countries Measure FDI*, IMF/OECD, 2003; UNCTAD, World Investment Report, 1998; Seymour, 1998.

investments in creating opportunities for sustainable growth (World Bank, 1999). Other forms of investment (*e.g.*, loans and other direct credits) are generally considered less adapted to projects involving high risk, as is the case of many projects in developing countries. Development banks and donor agencies have therefore been “tilting” their policies towards FDI inducement, and some actually make the ratio of aid to private investment an indicator of aid effectiveness.

On the demand side, developing countries have also been turning to FDI as a major source of development financing (North South Institute, 2004). Accordingly, they have designed and implemented policies, such as market liberalisation and infrastructure privatisations, to attract what is generally understood to be one of the less “fickle” international capital flows. While FDI may represent the “purest” form of private international financial flows and the most sought after for its alleged benefits, in reality it is usually part of a package of mixed debt/investment. Equity rarely comes alone, and debt availability, which allows both financial leverage and risk-sharing is often a condition of equity. This may come in the form of bank loans (local or foreign), or as inter-company debt, which is often structured to rank at an equal rate with other forms of indebtedness.

### ***Official Development Finance***

ODA and other official flows remain the dominant source of foreign investment in the poorest regions of the world, *i.e.* Africa and Asia, but this share varies widely by country. Regional trends also show large shifts since 1980 when all investment flows were positive, compared with 2002 when repayment of debt and other concessional financing in some regions considerably offset the stable ODA inflows, *e.g.*, in Central and Latin America and Asia.

Compared with information on FDI, significantly more data is available on the flow of aid from Development Assistance Committee (DAC) countries to developing countries.<sup>9</sup> Official Development Finance (ODF) is comprised of both ODA and Other Official Flows (OOF). OOF have a grant element of less than 25%, but are substantial in absolute numbers and tend to be concentrated in the economic infrastructure development and production sectors.<sup>10</sup> A small, but significant portion of total ODA has been provided for economic infrastructure development. This portion was about 20% of ODA from 1980 to 2002, but fell to only 6% in 2002.

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<sup>9</sup> The Members of the Development Assistance Committee are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States and the European Commission.

<sup>10</sup> These broad sectors accounted for more than 75% of total OOF in the 1992- 2002 period (DAC/CRS database, June 2004).

**Box 2. DAC definitions of official flows**

- Official Development Assistance (ODA): grants or loans to countries and territories included in Part I of the Development Assistance Committee (DAC) List of Aid Recipients (Annex 1) which are (i) undertaken by the official sector; (ii) have as their main objective the promotion of the economic development and welfare of the recipient country; and (iii) are at concessional financial terms (if a loan, have a grant element of at least 25%, calculated against a fixed 10% discount rate).<sup>11</sup>
- Official Aid (OA): flows which meet the conditions of eligibility for inclusion in ODA, except that the recipients are on Part II of the DAC List of Aid Recipients (transition countries).
- Other Official Flows (OOF): Transactions by the official sector with countries on the DAC List of Aid Recipients which do not meet the conditions for eligibility as official development assistance or official aid, either because they are not primarily aimed at development, or because they have a *grant element* of less than 25%.

Source : Glossary of Key Terms and Concepts, OECD 2002e.

### ***Environmental relevance of financial flows***

#### *Environmental performance of private flows*

It is generally assumed that new technologies and practices associated with foreign private investments can bring better environmental performance to host countries (WBCSD, 1998; Gallagher and Zarsky, 2002; OECD, 2002a). Foreign private investment flows, because of their magnitude, are important drivers in the scale, structure and technology effects that are key elements of environmental performance. Yet, it is not possible at the aggregate level, and even very difficult at the project level, to segregate which portions include an environmental aspect.<sup>12</sup>

Accounting for the environmental dimension of private investment flows is further complicated by the fact that environmentally sound technologies are not just discrete pieces of equipment, but overall systems that include know-how, procedures, goods and services, equipment as well as organisational and managerial processes. Since hardware and “soft” elements are generally included in technology transfer, quantification is all the more difficult (Radka, 2000). It is important for economic and sustainable development to target the sectors where the benefits can be the largest with environmentally-sound technologies.

FDI can be broken down into several capital account transaction types. “Greenfield” investment refers to start-up situations, while “brownfield” investment refers to existing companies, *e.g.*, through

<sup>11</sup> In addition to financial flows, ODA includes technical co-operation, forgiveness of debts, food and emergency aid and costs associated with administering development co-operation programmes. Grants, loans and credits for military purposes are excluded.

<sup>12</sup> This issue relates to the difficulties encountered by environment agencies, such as the Global Environment Facility in calculating the “environment incremental part” on which their financing is meant to be based. Other agencies such as Fonds Français pour l’Environnement Mondial have altogether given up trying to “price” incremental environment costs and rely on their appreciation of environmental benefits (Karsenty, 2002).

privatisation.<sup>13</sup> These different modes of entry shape the type of drivers influencing the environmental quality of the flows.<sup>14</sup>

Greenfield investments are often concentrated in sectors with potential high impacts on the environment, such as energy, transport, water and sewerage. They represented 43% of private sector participation infrastructure projects across all developing countries from 1990 to 2001 (World Bank Private Participation Database).<sup>15</sup> Worth noting is the high concentration of greenfield projects in FDI flows to the least developed countries (LDC) – more than 90% in the 1988 to 1999 period (UNCTAD, 2001). Albeit small in absolute terms, the size of individual projects represents important economic and environmental challenges and opportunities in the less developed economies.

“Motivation factors” driving foreign investment decisions may be broken down into four categories (Table 1). *Resource-seeking* investments allocate capital where natural resources are abundant and cheap. Firms could be also looking to enter a local market through *market-seeking* investments. *Efficiency-seeking* investments are multi-national enterprises’ response to rising labour or fiscal costs in developed countries. *Strategic asset-seeking* investors look for market power through global expansion.

Table 1. **Foreign direct investment: predominant motivation factors and modes of delivery**

	Greenfield	Brownfield
Resource-seeking FDI	Yes	Rare
Market-seeking FDI	Yes	Yes
Efficiency-seeking FDI	Rare	Yes
Strategic-asset seeking FDI	Rare	Yes

Source: OECD, 2002a.

*Resource-seeking FDI* represented 65% of Africa’s inward FDI flows in the 1990s. This may not boost confidence about prospects for achieving improved environmental performance (The North-South Institute, 2004). However, as seen in the mining sector in a few countries in recent years, the magnitude of both the investment and the environmental risks has attracted increased scrutiny from financial backers, local authorities and NGOs. This more careful attention to environmental impacts and technological innovation often constitute a good business case for improved FDI-led environmental performance and management capacity (OECD, 2002c).

*Efficiency-seeking FDI*, often geared towards exports to OECD countries, may put the company under the final product importer’s regulations or consumer demands. Research has shown that these factors have led to the introduction of better environment practices.

<sup>13</sup> Greenfield investment can also include the acquisition of an existing company, where the purpose is to transform it entirely. Other capital account transactions under the FDI category are profit re-investment and trade and inter-company credits.

<sup>14</sup> Political factors such as the fear of national sovereignty loss and economic factors such as the higher rate of expected net investment are often cited as important reasons behind preferences for greenfield type of foreign direct investment over divestitures (OECD, 2000a).

<sup>15</sup> See <http://rru.worldbank.org/PPI/>. The World Bank definition of developing countries includes transition countries.

This may not be the case for *market-seeking FDI*, where local consumers, investors and customers may not have either the will or the leverage to engage foreign investors on environmental grounds. An UNCTAD study of 160 affiliates of European companies located in Malaysia, India and China showed little influence of local market forces on the environmental outcomes of market-seeking foreign investment. It appears that the policies and local regulations of multinational enterprises (MNE) play the most important role in shaping environmental outcomes of market-seeking FDI (UNCTAD, 2002).

Anecdotal evidence shows that brownfield investments tend to be less sensitive to local environment regulation, sometimes because (newly privatised) state-owned firms inherit old technologies or face lax enforcement practices. One author believes that most investors in hydropower brownfield projects in Brazil have made money because they did not have to conduct environmental impact studies, whereas greenfield investors have not been profitable (de Olivera, 2003). In Zambia, foreign investors are exempt from liabilities arising from past activities of the locally acquired operations and can defer compliance with environmental standards (Boocock, 2002).

### *Environmental performance of official development flows*

#### Environmental relevance by sectors

There is no agreed methodology to measure the environmental impact of financial flows in general, nor of Official Development Finance in particular. To quantify the share of flows which are “environmentally relevant”, several approaches seem possible. Since all (or most) donors’ project activities are subject to environmental (and social) impact assessment guidelines and procedures, it could be theoretically possible to draw a picture of the environmental profile of aid flows through a study of all ODA financed projects documents. This detailed analysis, however, is beyond the scope of this report.

The approach chosen for the purposes of this report is to “scan” the DAC Creditor Reporting System (CRS) database, in order to provide a rough picture of aid flows which can be considered to be environmentally relevant.<sup>16</sup> The CRS database is divided into 37 sectors to which aid outflows are destined. For the purposes of this study, each of these sectors has been marked according to its “environmental relevance”, as follows (the full list of sectors is contained in Annex 2):

- Ten sectors have been marked as “*environmentally relevant*”: water supply and sanitation, transport and storage, energy, agriculture, forestry, fishing, industry, mining, construction, general environment protection. Some of these items are also likely to be among the most technology-intensive ones. The term “environment relevant” includes all types of flows that could have a direct impact on the environment: production (impacts on the availability and the use of natural resources), recycling (impacts on the environmental capacity to recycle or absorb waste and by-products of activities), enjoyment and recreation.
- 18 sectors have been classified as “*non-environmentally relevant*” and include banking and financial services, housing, trade, tourism<sup>17</sup>, communication, education and employment. This classification has to be read with some caveats, since it could miss environmental relevance of official aid in sectors like housing, tourism or education.

<sup>16</sup> See [www.oecd.org/dac/stats](http://www.oecd.org/dac/stats).

<sup>17</sup> Flows to support infrastructure investments related to tourism, which constitute the bulk of official support, to this sector, fall under the “environment relevant” category.

- A third category, “*not allocable sectors*”, includes activities for which environmental impacts cannot be captured by sectoral analysis under the currently available datasets. It includes structural adjustments programmes, food and relief aid, actions relating to debt, etc. The 9 activities in this category, which are not related to any particular sector, may also have large - although indirect - environmental impacts. Since they are not sector-based, this important category (up to 10% of bilateral aid, and 20% of multilateral aid), would deserve another type of profiling.

This classification has to be seen in the light of certain limitations: Projects under the same sector code could clearly have different scales of impacts. These impacts could be positive or negative for the environment (local, regional or global, and various combinations thereof). Analysis which draws only on financial data may also skew the results towards large projects and not entirely reflect donors’ action in the field of labour intensive activities such as research cooperation, technical assistance, consultancies and other “soft activities” and contributions. Cross-sectoral linkages are not evidenced, that could reduce, add or multiply the perceived net environmental impacts.<sup>18</sup> This analysis can therefore only serve as a rough evaluation, which could be usefully combined with country case studies.

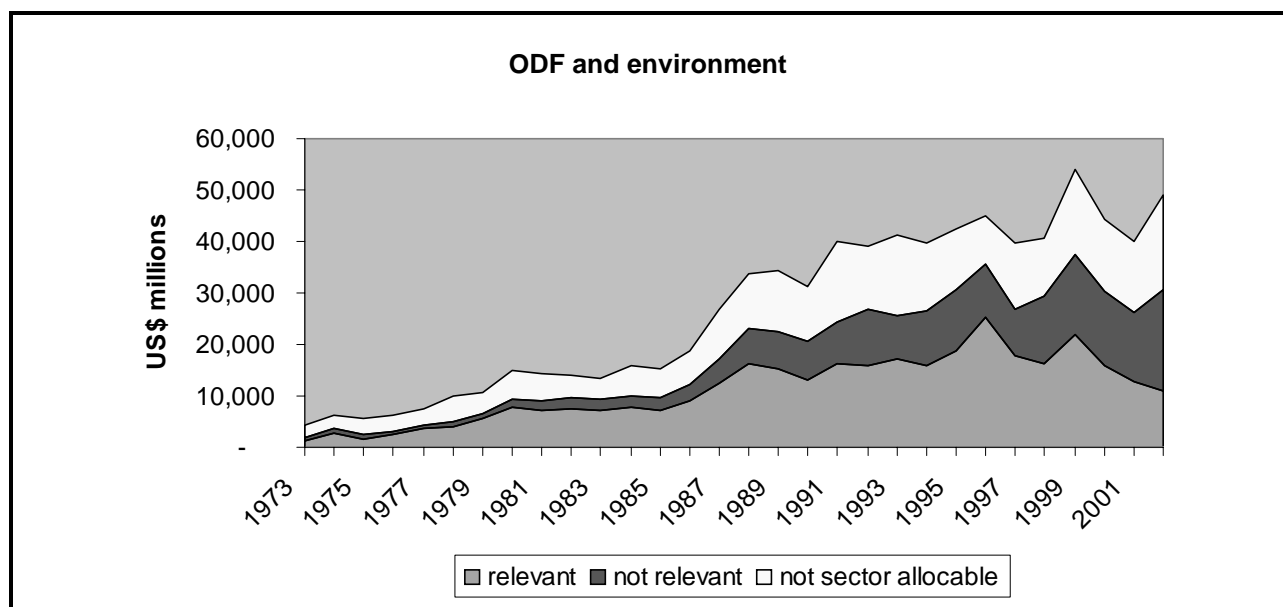
According to this classification, over the last three decades, an average of 40% (about USD 17 billion annually) of ODF (ODA + OOF) in the DAC portfolio has been directed to sectors classified “environmentally relevant”. Energy infrastructure development at 24% and transport at 22% have been the largest components in this category over the period. Together, energy and transport account for 19% of total ODF on average since 1973.

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<sup>18</sup>

The water and energy sectors epitomize those linkages and their potential far reaching cross-sectoral environmental impacts (ADB 2004). Water safety in its access, treatment and distribution dimensions is highly dependant upon power (and particularly electricity) availability. In many poor countries, and particular in sub-Saharan Africa, lack of power (or lack of access to power) induces water waste and shortage but also energy waste, through usage of inefficient fuels. Energy generation hinges upon water serviceability: water is a direct input in hydro-generation, a cooler in fossil burned or nuclear energy, a washing fluid for coal-based power. Furthermore, discharges of un-cooled or soiled water and dam construction may threaten biodiversity and livelihoods dependant upon natural resources gathering and exploitation.

Figure 2. Official Development Finance: environmental relevance, 1973-2002



Source: OECD, DAC Creditor Reporting System, 2004.

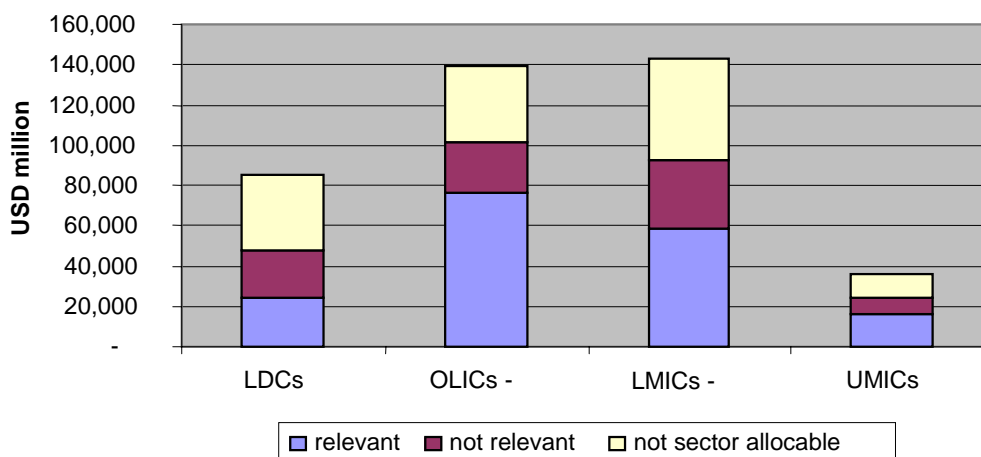
Figure 2 shows ODF flows from 1973 categorised by whether the target sector is “environment relevant” or not, or if it is assistance in an area that is not allocable to a sector. It depicts a peak in both the absolute values and the share of “environment relevant” aid activities in 1996. In recent years there has been an increase, in relative and absolute terms, of aid flows with little or no “environment relevance” and non sector-defined activities. This is an indication of a shift of ODA, and increasingly OOF, to support non project-based and economy-wide programmes.

The increase in aid flow amounts in 2002 was concomitant with a further large decrease of assistance targeted to “environment relevant” sectors, down to USD 10.8 billion, the lowest level since 1986. The main drivers behind this recent decline in “environment relevant” assistance have been large drops in the mining, industry and energy sectors. ODF now is largely dominated by flows that are deemed not to have direct impacts on the environment (“not relevant” sectors, amounting to 41% of total ODF, or USD 19.8 billion in 2002) and non project-related flows (“not sector allocable”, representing 37%, or USD 18.3 billion in 2002).

Figure 3 shows the different sector categories by income group from 1992 to 2002. The share of “not allocable” activities is the most significant inflow to the lowest income countries, where debt relief and emergency assistance programmes represent a large share of aid.<sup>19</sup>

<sup>19</sup>

Set out in 1996, the principal objective of the Debt Initiative for the heavily indebted poor countries (HIPCs) is to bring the debt burden to sustainable levels, subject to satisfactory policy performance, so as to ensure that adjustment and reform efforts are not put at risk by continued high debt and debt service burdens. It has been estimated that the net-present value of public debt in the 33 countries likely to qualify (approximately USD 90 billion) would be reduced by about half after HIPC and traditional debt relief. (<http://www.worldbank.org/hipc>).

Figure 3. **Official Development Finance: environmental relevance by income group, 1992-2002**

Source: OECD, DAC CRS, 2004.

ODF is increasingly concentrated in the two largest recipient countries: India and particularly China, which are both in the Other Low Income Countries (OLIC) group. The OLIC group has the highest share of aid in “environment relevant” sectors with more than 80% on average for the 1992-2002 period. This distribution may suggest a higher degree of political leverage of the donor community in the lowest income countries with their switch to economy-wide reform programmes, that may be resisted by recipient countries with more influence. For example, J. Gupta argues that the Chinese government tends to direct development assistance to large projects (particularly transport and energy,) and shy away from assistance that is affiliated with policy adjustments and reforms (Gupta, *et al.*, 2001).

This sectoral analysis points out a growing uncertainty of the ability to assess the environmental impacts (positive or negative) of ODF. Two factors contribute to this: the decline in flows to “environmentally relevant” sectors that are routinely subject to environmental impact assessments; and the increase in both percentages and absolute numbers of non-project assistance, the environmental impacts of which are difficult to assess. Using a sectoral approach to scan ODF data to gauge their “environmental relevance” fails to grasp the multi-sector linkages as well as the fact that environment policies and associated flows are often cross-sectoral.

#### DAC Environment markers

Another mechanism to analyse the linkages between official aid and environment are the “Environment markers”, which the DAC has established under the Creditor Reporting System.<sup>20</sup> In reporting ODA to the DAC, donors classify an activity as “environment-oriented” if a) it is intended to produce an improvement in the physical and/or biological environment of the recipient country, area or target group concerned, or b) it includes specific action to integrate environmental concerns with a range of development objectives through institution building and capacity development.<sup>21</sup> Policy marker data are descriptive, rather than

<sup>20</sup> Other markers focus on gender equity; direct assistance to poor people, participatory development/good governance.

<sup>21</sup> This approach differs from the sectoral analysis in several ways: it captures only bilateral assistance flows that aim to produce environmental improvements, therefore reflecting environmental policy objectives; it excludes so-called other official flows (OOF); it covers both sector-allocable and non sector-allocable aid,

quantitative. The system allows for the identification of activities targeted to a policy objective. It gives information on the degree to which Members implement the agreed policies in their aid programmes. Data collection is based on a marking system with three values:

*principal* objective: those which can be identified as being fundamental in the design and impact of the activity and which are an explicit objective of the activity;

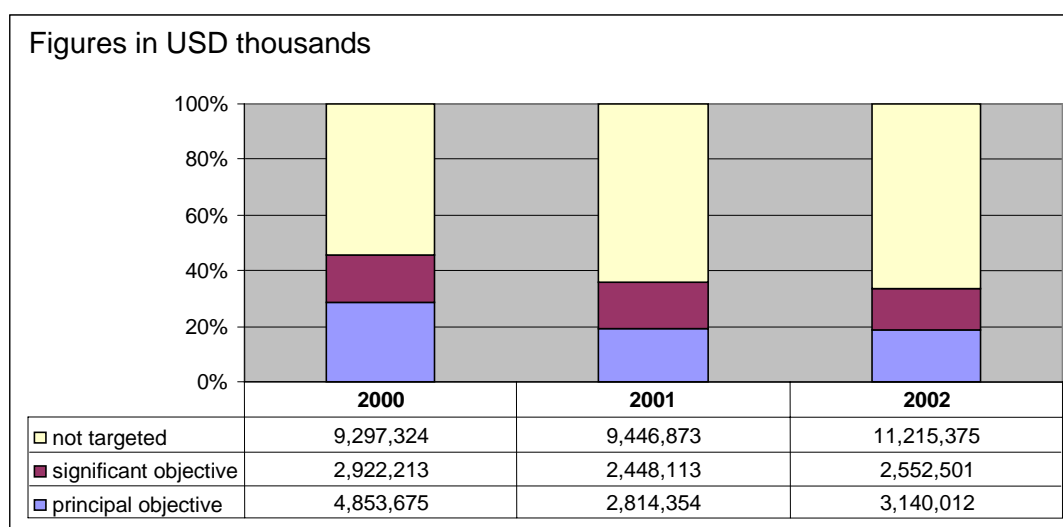
*significant* (or secondary) objective: those which, although important, are not one of the principal reason for undertaking the activity,

*not targeted* to the policy objective: the activity has been screened against, but was found not to be targeted to, the policy objective.

Examples of “marked” activities include: social infrastructure and services (water resources protection, sanitation or waste management practices that bring environmental benefits); economic infrastructure and services (activities promoting sustainable use of energy resources; energy conservation); production sectors (sustainable forest management programmes; combating land degradation and deforestation; adoption and promotion of cleaner and more efficient technologies).

The marker system has been gradually put in place since the beginning of the 1990s. This short timeframe does not allow to carry out trend analysis, but does provide a snapshot of donors’ bilateral activities with assistance targeting environmental objectives (Figure 4).

Figure 4. **Environment targeted aid, 2000-2002**



Source: OECD, DAC CRS, 2004.

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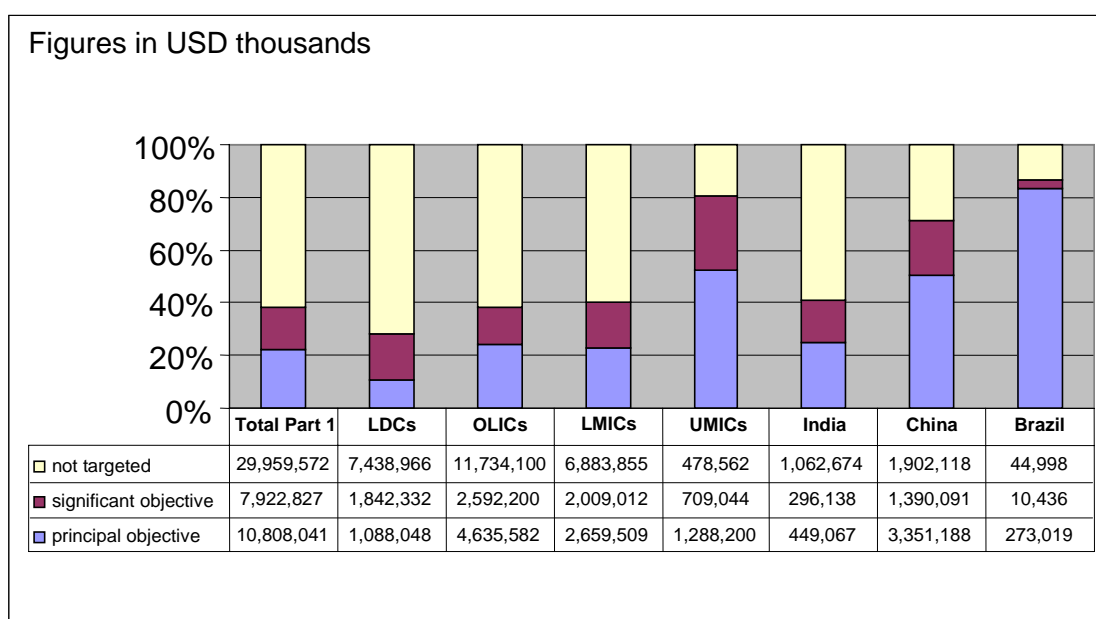
and theoretically therefore would enable a scanning of the entire bilateral assistance portfolio; and administrative costs are excluded. This is not trivial since administrative costs associated with aid and reported as ODA amounted to USD 1.3 billion in 2002.

ODA with policy objectives identified as being principally or significantly targeted towards environment represent 38% of the total number of marked activities, or 9% percent of total ODA with an average annual amount of USD 6.2 billion in 2000-2002.<sup>22</sup>

Globally, higher shares of “environment targeted” ODA (principal objective + significant objective) flows are linked to: higher levels of income, higher shares of foreign direct investment, and higher shares of “environment relevant” (sector defined) aid. China, a major magnet of ODA, also attracts 25% of aid targeted to the environment. This is also reflected in the high share of environment-targeted aid in the OLIC income group (Figure 5).

A further attempt (still in the pilot phase) to identify environment-related aid are markers, also within the DAC Creditor Reporting System, to quantify aid flows used to support the Rio Conventions (Framework Convention on Climate Change, Convention on Biological Diversity, Convention to Combat Desertification). ODA targeted to the implementation of the three Rio Conventions (a subset of the environment-oriented ODA), is estimated at an annual average of USD 4 billion from 2000 to 2002, or one-tenth of total ODA.<sup>23</sup> Climate change activities under the UNFCCC receive the bulk of the ODA targeted at Rio Convention objectives, but it remains a very small amount of total aid (Figure 6).

Figure 5. Environment targeted aid by income group and selected countries, 2000-2002



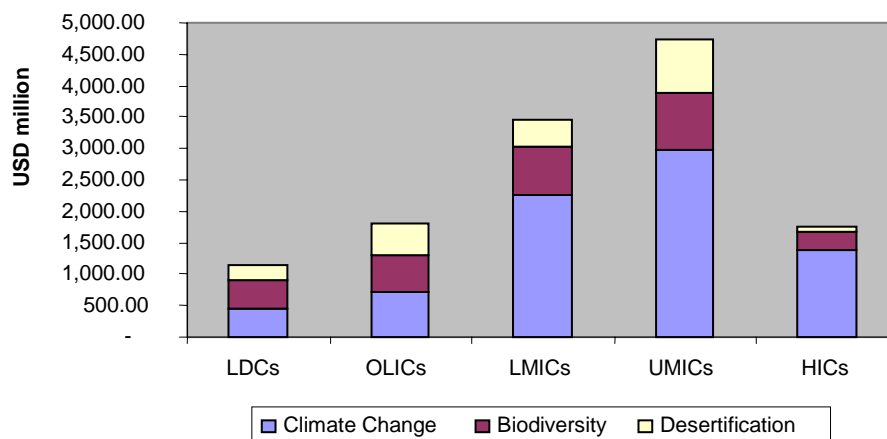
N.B.: China and India are part of the OLIC group, Brazil of the UMIC group.

Source: OECD, DAC CRS, 2004.

<sup>22</sup> Caution should be exercised when analysing these figures. Even if most DAC countries have reported their ODA under the marker system since 2000, the aggregated part of the three markers represents less than one-fourth of total ODA, which should theoretically be fully covered. Administrative burden may be leading some DAC members to exclude some activities from the marker system.

<sup>23</sup> This estimate takes into account possible double counting, since aid activities could be marked against one or more of the conventions. It also takes into account aid extended through multilateral institutions, and particularly the Global Environment Facility, which is on the order of USD 450 million per year.

Figure 6. Share per Convention/country income group



Source: OECD, DAC CRS, 2004.

### 3. Mainstreaming environment into financial flows to developing countries

This section reviews the drivers and instruments that influence the environmental content of aid and private investment flows - the “supply side” - to developing countries. It provides, first, an overview of how environment is mainstreamed in project-based financing, both public and private, and the levers that influence the integration of environmental considerations. It then examines non-project based activities, and finishes with an overview of the role of multinational enterprises in contributing to enhancing the environmental performance of investments.

#### *Environment in project-based activities*

The donor community has increasingly recognised that environmental issues, both local and global, are an important facet of development and poverty alleviation objectives (OECD, 1995). The concept of mainstreaming environment into development policies is now generally accepted, although not always effectively enacted. Among the key drivers of this emerging integration, the following can be highlighted:

- Developing countries are often highly dependent on natural resources; harm to the environment in these countries can seriously hamper their opportunities for development.
- Rising awareness and international attention to global environmental issues has underscored the relationship between local economic activity and its global environmental impact, showing that development actions and global environment policies are intimately linked.
- Quality environmental and health conditions have been recognised as a key aspect to attract private investment, particularly foreign direct investment. There are many regional and sectoral examples of economic and development decline due to weak environmental management. Pollution can be an inhibiting factor for growth and productivity, and reduce the attractiveness for outside partners to invest, live and work. For example, the service industry, especially tourism, is highly dependant on favourable environmental conditions to attract clientele.

- Non-governmental organisations (NGOs) and other stakeholders have put pressure on governments and development co-operation agencies to ensure that development activities do not negatively impact the natural environment of recipient countries.

### ***World Bank guidelines influence on financial flows***

The World Bank Group is often the largest, or even the sole, international lender in some of the least developed countries, and a significant actor in most developing countries. The Group includes subsidiaries specialised in lending, the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA), investment in private sector projects (International Finance Corporation (IFC)) and guarantees (Multilateral Investment Guarantee Agency (MIGA)). The World Bank Group's influence over development and its environmental dimension stems from its direct involvement and its influence on other financing.

World Bank involvement in project financing can have a positive impact on a project's risk profile, thereby attracting private finance. Conversely, refusal by the World Bank to support a project is often seen as a negative sign, entailing a higher risk premium from international private finance. Generally, multilateral development bank involvement is seen by commercial and investment bankers as a form of partial guarantee against credit risk, and also financial and reputational risks that may arise from social or environmental contingencies.<sup>24</sup> This is all the more important following the World Bank's shift in the early 1990s to increase private finance and investment in infrastructure development (World Bank, 2002c).

World Bank financed projects generally require compliance with social and environmental standards and procedures. These have been examined in depth in other OECD reports and will not be discussed here in detail (OECD, 2003). Box 3 below provides an overview of World Bank environmental guidelines and safeguard policies.

The World Bank guidelines and safeguard policies often serve as a baseline against which projects are screened for environmental viability.<sup>25</sup> Increasingly, financing institutions use these guidelines in their own lending policies. One example are Export Credit Agencies and private financial institutions standards. The 2003 Recommendation of the OECD Council on Common Approaches on Environment and Officially Supported Export Credits specifically refers to World Bank standards and recent surveys show that many ECAs are increasingly drawing from World Bank environmental standards to formulate their own policies (OECD, 2003a; 2004).

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<sup>24</sup> Source: conversation with international commercial and investment bankers.

<sup>25</sup> The French export credit agency, COFACE, for example, says it would reject all non World Bank compliant projects, with the exception of nuclear power plants, for which no such guidelines exist. Higher standards are also applied to define a "recommended environmental level" and a superior "good practice" level.

### Box 3. World Bank guidelines and safeguard policies

The World Bank has established a three-tiered format for its comprehensive set of policies on a diversity of subjects, including environmental assessment and related environmental and social “safeguard policies”.<sup>26</sup> The first two, Operational Policies (OP), are mandatory standards, while Bank Procedures (BP) provide guidance for their implementation. There are also Good Practices (GP) documents which provide non-binding guidelines for staff and project sponsors.

The World Bank’s Pollution Prevention and Abatement Handbook (PPAH) contains prevention and abatement measures and numeric targets for reducing pollution emissions from the production process in over forty industrial sectors. The targets include emissions levels considered acceptable to the World Bank. The guidelines, through cleaner production and end-of-pipe solutions, are designed to protect human health, be cost-effective and commercially proven, promote good industrial practices that can lead to greater productivity and energy efficiency, and follow current regulatory trends. They are designed to be used in the context of the World Bank’s Operational Policy (OP) 4.01 on Environmental Assessment.

The World Bank Group has developed a set of environmental and social “safeguard policies” which are designed, by sector or issue, to ensure that operations “do no harm”. They include OP 4.01 on Environmental Assessment, which provides a framework for evaluation of potential impacts and risks, public consultation and disclosure. The environmental safeguard policies also include OP 4.04 on Natural Habitats, which does not allow support for projects that involve significant conversion or degradation of critical habitats; OP 4.36 on Forests, which aims to support sustainable forestry practices; OP 4.09 on Pest Management, which aims to support integrated pest management; OP 4.37 on Safety of Dams, and OPN 11.03 on Cultural Property.

Source: World Bank, [www.worldbank.org](http://www.worldbank.org), OECD (2003a).

The World Bank’s environmental guidelines seem to filter through most other forms of international project financing. For example, the “Equator Principles”, discussed below, are based on the IFC environmental and social guidelines. A contribution to the World Bank Extractive Review noted that “in the past several years, the World Bank Group – perhaps without intending it or fully realising it – has become a standard bearer that members of the international corporate community assess themselves against, often regardless of whether they are involved in a direct relationship. For example, a trend has been noted that some extractive industry companies, who, for the most part are not direct recipients of World Bank assistance, are changing the way they do business and have adopted practices that follow social and environmental guidelines similar to those prescribed by the World Bank.” As stated by the president of a Canadian mining company “You can’t get funding these days unless your feasibility study fulfils the World Bank requirements. It doesn’t matter which lender you go to” (Associates for Global Change, 2003).

This diffusion of World Bank environmental procedures may be a step towards a harmonisation of public and private, financial and corporate, multilateral and national practices, with beneficial effects on the cost, speed of aid and investment delivery, and simplification of donor and host country administrative tasks linked to project-based activities. It is also complementary with other harmonisation efforts such as the OECD’s Common Approaches on Environment and Export Credits, which aim to avoid free-rider effects and to ensure a level playing field through effective peer pressure.

<sup>26</sup>

The IFC uses two sets of guidelines for its projects: the environmental guidelines contained in the Pollution Prevention and Abatement Handbook, and a series of environmental, health and safety guidelines, which differ from those of the World Bank.

Wide acceptance and application of harmonised environmental procedures could lead to new challenges to take into account new technological advances or stakeholders' demands. For example, the fact that neither the World Bank nor other development banks or ECAs have clear mandates to deal with climate change related impacts might become an issue.<sup>27</sup> Another difficulty may reside in the fact that World Bank and donor agencies share a development objective, whereas other financiers may look at environment issues only through the financial risk prism.

Moreover, two distinctive features of the World Bank's institutional framework - full public disclosure requirements and the existence of an easily actionable independent inspection panel - are not part of the practice in all institutions that may have otherwise adopted closely-related environmental and social guidelines. These mechanisms are designed to provide shareholders and other stakeholders' comfort on the accountability of institutions' operations with respect to their policies and procedures.

### ***Environmental impact assessment procedures in development assistance agencies***

Most ODA financed projects are now subject to some form of environmental impact assessment (EIA). DAC members have put in place policies which require projects to be screened and their potential environmental impacts assessed, before a decision on financing is taken. These policies follow several guidance instruments developed by the DAC, such as the DAC Guidelines on Aid and Environment (OECD, 1995). The actual implementation and effectiveness of such policies has not been examined in depth. The long-term effects of these policies would also require further analysis. As an example, 70 % of EIA in Tanzania during the period 1980-1997 were performed to fulfil donors' requirements. Only 4%, however, included local staff training, and there were no examples of donor interest beyond the EIA submission phase (IIED, cited in OECD 2000). This would tend to show that only part of the available leverage was actually used, and that the capacity building opportunities of the EIA process remained largely untapped.

While there may be consensus on the importance of the environmental dimension of development activities, how and to what degree to ensure its integrity are subject to various approaches. For example, despite general agreement on the ultimate goals of sustainable development, there are noticeable differences in perspectives between the development and the environment communities (Corfee-Morlot, *et al.*, 2002). For some environmental specialists, the linkages between investment, development and environment are a policy concern that can be best approached from the "supply side" by incorporating environmental provisions within the different financial flows. The development community on its part puts more emphasis on the "demand side". This approach implies that host countries are expected to establish their own development priorities. Environment may not be very high on developing countries' agendas, and this particularly holds for climate change considerations (Adger, *et al.*, 2001, 2003).

### ***Environmental impact assessment by private finance providers***

The private financial industry can have significant indirect environmental impact as it exerts a large influence over capital allocation. Of note is international financing for infrastructure projects in developing countries, particularly power generation, which mobilises a large portion of international private finance. Private financing can also help to shape the environmental trajectories of developing countries and influence technology choices, which have long lasting implications in low capital rotation industries (Sussman, 2004; Schmidheiny and Zorraquín 1996).

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<sup>27</sup> The IFC Compliance Adviser Ombudsman cited the lack of project level measurements of GHG as one of the safeguard policies gaps. (IFC (CAO), review of IFC's Safeguard Policies. [www.cao.ombudsman.org](http://www.cao.ombudsman.org)).

Private finance is provided through three main channels, all of which may influence the environmental outcomes of financial flows: lending, risk management, and asset gathering and management. These are linked with the traditional main activities of finance and are key points of leverage.<sup>28</sup>

By providing project loans, private financiers facilitate technology transfer to developing countries and may lend support to activities with high environmental impacts (positive or negative). In doing so, private finance, however, is mostly acting as a short-term lender, which can limit the opportunity to influence environmental performance. Long-term (more than one year), pure non-recourse lending is rare without some form of solid guarantee, *e.g.*, government, corporate sponsors, export credit agencies, multilateral investment guarantee agencies, or the involvement of development banks.<sup>29</sup>

New innovative financing tools designed to reduce overall project risks, and particularly environmental risks, seem to be developing. Some enable the transfer of risks to the private sector and worldwide investors through mutualisation (see Box 4).<sup>30</sup> Such instruments allocate risks where they are best accepted, managed and controlled. This can be seen as a substitute for capacity and institutional building (Swedish Ministry for Foreign Affairs, 2003). On the other hand, such complex transactions require stable institutional frameworks to be operative. In response to this, financial institutions may engage in helping to foster enabling frameworks for investment.

As part of the lending chain, private financial institutions run the risk of being found “guilty by association”, even though they may have no liability related to the environmental or safety performance of a project, as several highly publicised cases have shown. Managing their own loan portfolios’ environmental risks as these risks relate to their regulatory and financial responsibilities and their reputation has been a growing concern and area of rapid development.<sup>31</sup> These concerns have led to the hiring of environment risks specialists at some leading banks and an increasing focus on environmental due diligence (Ganzi and Tanner, 1997).

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<sup>28</sup> Leverage is twofold: the donor, lender or investor’s power to act effectively, *e.g.*, enact environmentally-sound practices, but also the amplification of potential gain, *e.g.*, through technological spillovers.

<sup>29</sup> Non-recourse is where lenders have no other claim than on the projects assets and cash flow.

<sup>30</sup> Risk mutualisation entails either a risk sharing agreement or an exchange of opposite risk profiles.

<sup>31</sup> One area of particular concern is the liability arising from loan defaults associated with clean-up operations on FDI financed brownfield projects in developing and transition countries (OECD, 2000a).

#### Box 4. Financial engineering to manage global environmental risks

Investment banks and insurance companies have been promoting a class of new environment-related products. These “financial mitigation” tools may help manage investment in a new risk environment.

CAT bonds (catastrophe bonds) are protections against extreme natural catastrophe events such as hurricanes or earthquakes where the capital is provided by institutional investors eager to invest in bundled assets with low correlation to other financial assets. They are mainly used by insurers as a re-insurance mechanism and allow coverage of larger nature hazards.

CAT swaps (catastrophe swaps) allow an exchange of equal risks between counterparties who have their peak risks in geographically different locations or at different times of the season. They are based on the fact that global financial risk is not equal to the sum of individual risks. They could be used as clean energy production/distribution insurance mechanisms, allowing wind, hydro or solar-based production facilities to connect to the grid through long-term “deliver or pay” contracts, and therefore alleviate concerns related to intermittent generation resources.

Options on CDM-based Certificates of Emission Reductions (CER), through the creation of a “forward carbon price curve”, allow hedges against potential price risks in the future carbon revenue stream. Such options would give the holder the right, but not the obligation, to sell CERs at a pre-agreed price. CDM project sponsors and investors in environmentally-sound projects would be able to discount their future CERs and smooth their cash-flow profile, which is often characterised by high initial investment outlays and long payback periods.

There may be opportunities for ODA to provide capital for such transactions, not only in subsidising premium, but also in helping to create and maintain the institutional and legal frameworks necessary for such complex transactions.<sup>32</sup>

At the international level, financial institutions established a voluntary initiative in mid-2003 to provide a framework to manage environmental and social issues in project financing. Known as the “Equator Principles”, signatories agree to apply guidelines for environmental and social impact assessment based on IFC guidelines.<sup>33</sup> The 24 banks adhering to the Equator Principles provided 80% of the private project finance market (recourse and non recourse), or USD 55 billion worldwide in 2003<sup>34</sup>. No data are available specifically on flows to developing countries, whose share is estimated to be quite small. Still in their infancy, it is too soon to assess how the Equator Principles may translate into “greener” investment.

Asset management is by far the largest contributor to financial flows between OECD and developing countries through portfolio investment. It also displays the highest volatility, with the associated development and environment risks. Yet, the potential link between corporate financial and environmental

<sup>32</sup> Further suggested readings on the theory of CATs include Croson and Kunreuther (1999), Litzenberg *et al.* (1996), and for a more “business oriented view”: [www.risktransfermagazine.com](http://www.risktransfermagazine.com) and [www.environmental-finance.com](http://www.environmental-finance.com).

<sup>33</sup> The Equator Principles apply globally in all sectors where the project size exceeds USD 50 million. Projects are categorised into three groups: High-impact ‘Category A’ projects require a full environmental impact assessment (EIA); ‘Category B’ projects, with lower likely impacts, require a less-extensive EIA; and ‘Category C’ projects with minimal or no adverse impacts do not require an EIA. The principles also require borrowers in high impact projects to carry out appropriate local stakeholder consultation. In addition, the borrower or a third-party expert must put an environmental management programme in place to address project compliance, mitigation, action plans and monitoring procedures. For high-impact projects, compliance with the principles is written into the loan covenants: if a borrower breaches its obligations, the bank can withdraw funding. Source: [www.equator-principles.com](http://www.equator-principles.com).

<sup>34</sup> Dealogic ProjectWare database, [www.dealogic.com](http://www.dealogic.com).

performance can be a significant lever. In the case of developing countries, investor engagement could have an influential effect to push for an appropriate legal framework and enforcement practices for environmental benefit.

Funds associated with environmentally and socially sound assets have been growing steadily over the past ten years, and some of the largest fund managers have taken initiatives in this field.<sup>35</sup> The share of “environmentally responsible” investment within the global asset management market is difficult to gauge. There is also no indication as to the volume of these funds invested in developing countries. Whether asset pricing generally reflects individual corporate or country environmental performance remains a debated question (UNEP, 2004).<sup>36</sup> Pricing signals reflecting environmental performance would be a powerful incentive for funds investment allocation.

### *Non project-based activities: changing approaches for development assistance*

Both bilateral donors and multilateral development banks have been gradually changing the focus of their activities focus from project-based aid to support for sector or policy reform. The World Bank aid paradigms and instrument shifts illustrate this evolution (Table 2).

The World Bank Group’s initial development programmes were targeted towards re-construction and development, and were enacted through project-type investments loans. Some of the projects, particularly in the late 1970s, were criticised for their detrimental environmental impacts. The World Bank made incremental policy changes and in 1989 adopted an operational directive that introduced environmental impact assessment as a standard procedure in bank financed projects. The guidelines have evolved over the years and are today embodied in the Safeguard Policies (see Box 3 above).

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<sup>35</sup> For example, the “Green Wave Initiative” was an environmental investment initiative proposed in February 2004 by California’s State Treasurer, whose mandate include controlling management of pension funds totalling USD 50 billion. This initiative calls for investment in stocks of environmentally responsible companies, environmental accountability and disclosure and targets private investment in environmental technologies.

<sup>36</sup> Government bond trading, which is a large part of portfolio flows and the most traded instruments in a majority of developing countries, escapes such “positive environmental” selection. They are not attached to particular projects or sectors, but to the state’s sovereign status (or *quasi* sovereign status, in the case of government-backed debt). One might argue that their environment impact is nil, and that their very nature renders environmental impact assessment irrelevant. A recent Socially Responsible Investment government bond fund specifically excluded environment from its selection criteria.

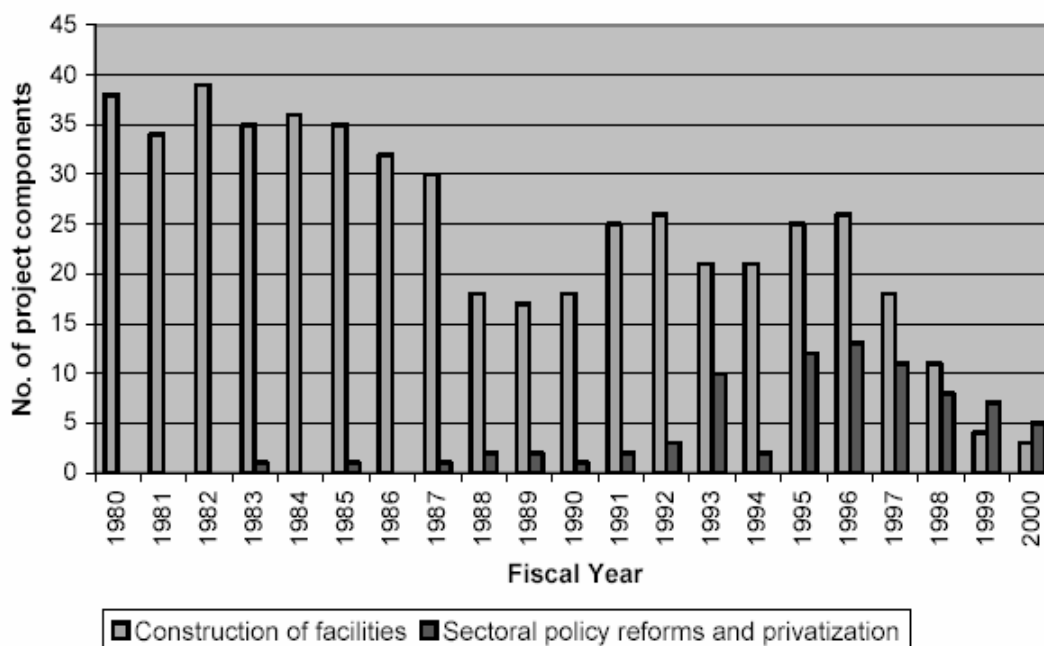
Table 2. World Bank development paradigms and aid delivery instruments

<i>PARADIGM</i>	<i>INSTRUMENT USE</i>
1960s : from reconstruction to development	Investment projects in infrastructure
1970s : from infrastructure to human capital	Physical investment for social sectors
1980s : from projects to policies	Introduction of adjustment lending in support of macroeconomic reforms
1990s :from policies to institutions	Convergence in the use of investment and adjustment instruments; programmatic lending
2000s : supporting systemic changes	Country business model; Poverty Reduction Strategy frameworks

Source: World Bank, *Introduction to Bank Operations*, [www.worldbank.org](http://www.worldbank.org).

Figure 7 shows the trend from project-based lending to reform and privatisation in the power sector, along with a decline in the number of loans.

Figure 7. Composition of World Bank loans in the power sector, 1980-2000



Source: World Bank (2002), *Private Sector Strategy - Directions for the World Bank Group 2002*.

Over the last two decades, the World Bank has been using adjustment lending instruments. These are mainly comprised of Sectoral Adjustment Loans (SECAL) in specific economic sectors and Structural Adjustment Loans (SAL) as balance of payment support against a policy matrix. SAL and SECAL are essentially policy-based lending, more or less tied to a specific sector. SAL and SECAL are widely recognised to be among the most powerful economic management tools, since they can have far-reaching

effects, sector-wide or across the entire economy. They have been critical in the implementation of economic reform of most developing and transition countries, and represent a large part of World Bank activities: 42% of the combined IDA and IBRD three-year average loan portfolio in 2002.

Structural adjustment policies involving both the World Bank and the IMF were initially designed for countries with severe balance of payment problems. Packages can involve, among other conditionalities, budgetary cuts, currency devaluation, privatisation and increases in tariffs. In spite of several packages, a few countries experienced repeated financial and currency crises requiring further assistance. This drew criticism from NGOs and parts of the development community concerning the long-term effectiveness and the external costs of such “therapies”. For example, loans to India in the early 1990s to shore-up state-owned enterprises were extended against the conditionality of lower fiscal deficits and resulted in hasty privatisation of electricity generation companies through “fast track approvals”. This raised criticism on environmental and transparency grounds (Gupta *et al.*, 2001). Overall, criticisms of structural adjustment lending focus on their direct or indirect neglect of long-term social and environmental issues.

A new approach was agreed by the World Bank and the IMF in 1999. All concessional lending and aid for debt relief under the Heavily Indebted Poor Countries (HIPC) Initiative would be based on Poverty Reduction Strategy Papers (PRSP). PRSPs are meant to be country-driven, comprehensive in scope, partnership-oriented, participatory and based on a long-term perspective. As a result of this new approach, PRSPs are currently on the agendas of about seventy low-income countries. In the coming years, it is expected that so called Poverty Reduction Strategy Credits will be the main modality of World Bank lending, though some project lending will remain.

PRSPs are now the basis of (and the conditionality for) many types of ODA financing, including by the World Bank, Global Environment Facility and an increasing number of bilateral programmes. They are designed to enhance co-ordination and aid effectiveness, reduce risk for investors and lenders (through a better visibility of regulation and policy changes), and therefore help to engage partners in long-term commitments by clearly identifying ways in which foreign investments can be used for public policy objectives.

### ***Environmental dimension of non project-based financing***

A growing body of work evidences the linkages between economy-wide reform and environmental impacts (Munasinghe and Cruz 1995). According to a World Bank study, “World Bank, IMF and other multilateral and bilateral agencies participating in economic reform or even structural reform programs have yet to take full and explicit account of environmental risk in the design and implementation of non-project aid. Rapid structural change may induce severe pollution issues, especially locally” (Wheeler, 2000). The study emphasised the need for additional targeted programmes to alleviate those risks.

A recent study highlights positive and negative environmental impacts associated with the use of macro-economic instruments to foster development. Changes in tax and subsidy schemes that cause distortions are cited as positive factors because they can favourably alter consumption patterns, and therefore resource use and emissions. On the downside, in some instances, they can contribute to moving part of the population into extreme poverty and push them to rely on environment unfriendly activities, such as illegal logging and mining in Indonesia and South America (IIEE, 2002). Such indirect consequences of macroeconomic policies further highlight the linkage between poverty and environment.

Sectoral adjustment loans (SECAL) have been subject to the World Bank’s Safeguard Policies since 1999 and therefore require environmental assessments. Structural adjustment loans (SAL), however, are excluded from these procedures. A major impediment is that the traditional environmental assessment tools

designed to evaluate tangible impacts on local environments are not well suited to assess the environmental impact of structural adjustment loans. This is due not only to the SAL's wide reach and indirect causal links with environmental impact, but also to the short timing constraints linked to the delivery of most SAL in response to crisis.

The lack of adequate environmental assessment methodologies has raised concern. Some NGOs are calling for systematic environmental assessments of macroeconomic reforms (WWF, 2000).<sup>37</sup> OECD members, through a DAC task force and the World Bank, are currently working to frame a "Strategic Environmental Assessment" methodology which is to also integrate the context of "development ownership".

In the context of development ownership, the use of PRSPs as a basis for aid delivery raises the question of how to ensure that aid is well used and consistent with good environment management. Most World Bank loans associated with PRSPs, such as the Poverty Reduction Credits (PRC), the nature of which is broad budget support, are similar to structural adjustment loans and are not subject to environmental impact assessments (World Bank, 2002a). This also raises the issue of whether individual projects, bundled to qualify for PRC, should be subject to standard impact assessments and other project-related evaluation tools and safeguards (*e.g.*, full disclosure requirements and access to the inspection panel).

The donor community has been instrumental in examining poverty and environment linkages (OECD, 2002; DFID *et al.*, 2002), showing how critical environmental management is in poverty alleviation and development in general. How then should donors react when PRSPs ignore environmental issues? On the one hand, the "ownership" concept would push them to refrain from financing environmental policies and projects should they not be part of the host government's strategy. On the other hand, ignoring environment and poverty linkages would put at risk aid effectiveness in promoting sustainable growth.

One approach is to "mainstream" environmental elements in the PRSP.<sup>38</sup> The World Bank's Environmental Strategy recognises that "...integrating environmental considerations into the new Poverty Reduction Strategy Papers is an urgent task" (World Bank, 2001a). Reviews of PRSPs show that environmental and sustainable use of natural resources aspects are not fully taken into account. "The fact that many PRSPs pay so little attention to basic issues of environmental health, natural resource degradation and vulnerability to environmental hazards is a cause for concern" (Bojo and Reddy, 2002, 2003).

### ***Environmental performance of multinational enterprises***

The impacts - positive and negative - of private investment on the environment have been studied both by OECD and other institutions (OECD, 2002b,c). These studies generally emphasise the role of investors in ensuring that investments in developing countries meet acceptable environmental standards, including in countries in which environmental regulation and enforcement may be weak or insufficient. Corporate social responsibility and compliance with environmental codes of conduct are key to enhance the environmental performance of investments. Among the currently available instruments, the OECD Guidelines for Multinational Enterprises, revised in 2000 to better take into account sustainable

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<sup>37</sup> WWF proposes a new "Environmental Impact Assessment for Macroeconomic Reform Programs". Its objective is not merely to identify negative environmental consequences but to also ensure that reforms are designed and implemented with full awareness of their consequences, both positive and negative.

<sup>38</sup> Bojo and Reddy define mainstreaming "not as the existence of a stand-alone section or chapter in the PRSP, nor the "frequent reference to the 'environment' in the PRSP", but to: a) description of environmental issues and opportunities; b) analysis of links between poverty and environment; c) design of responses to meet the identified challenges; and d) inclusion of the environmental constituency in the process leading to the design and implementation of the PRSP.

development goals, stand out as the only instrument which a large number of governments have committed to support.

The OECD Environment Directorate has undertaken a survey of environmental management, innovation and performance in seven OECD countries (Japan, France, Germany, Hungary, Norway, Canada and the United States), to look at how private investment in developing countries can be influenced or governed by the principles and operating practices of the investor. The survey was targeted at facilities in manufacturing sectors with 50 or more employees, and allows for the analysis of environmental practices across a wide variety of vectors, including many characteristics of facilities commonly associated with multinational enterprises (MNE) (large size, international markets, overseas headquarters, stock market listing).<sup>39</sup>

An analysis of the OECD's Facility-level Database on Environmental Performance - as reflected in terms of reported changes in emissions of global pollutants - offers a contrasted view of the relationship between environmental management and performance and structural characteristics of multinational enterprises. On the one hand, descriptive bivariate analysis of the survey tends to confirm the widespread hypothesis that facilities associated with MNEs are more likely to have positive environmental practices and outcomes than non-MNE facilities. This is consistent with the prevailing view in the literature.

On the other hand, preliminary econometric (multivariate) analysis shows that none of the individual internal characteristics associated with MNE facilities (facility size, market scope, overseas headquarters, stock exchange listing) seem to be a significant positive driver for better environmental performance. This suggests that the characteristics of an MNE facility are not sufficient on their own to ensure a greater level of performance compared relative to that of non-MNE facilities, even if the descriptive bivariate data analysis shows a strong positive relationship.

One possible reason for this discrepancy is that other variables which are highly correlated with MNE characteristics are also correlated with environmental performance. For instance, since the policy framework appears to be significant in the preliminary analyses, it may be that positive relationship in the bivariate analysis is just reflecting the greater pressure which MNE facilities face. Voluntary approaches and guidelines, such as the OECD's Guidelines for MNEs may also be influential. Thus, and not surprisingly, the analysis shows that the policy context in which firms operate has a large impact on environmental performance. The domestic policy context in developing countries, as it relates to incoming financial flows, is examined in more detail in the next section of this report.

#### **4. Investment and environment: the domestic policy context**

##### *Links between economic growth, environmental impacts and international aid*

To spur economic growth, development policies need to attract and retain investments. Capital is the engine for growth, and adequate attention to related environmental elements is a necessary condition for sustainable development. This is a synergistic combination since, as discussed in previous sections, sound environmental policy is also an important driver to attract capital. A solid environmental framework reduces investment risks in all its aspects: financial, legal and reputational. Hence, it is important to mainstream environment in development policy processes. This means integrating environment as a critical

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<sup>39</sup> The full survey can be found in "Multinational Enterprises and Global Pollutants: A Review and Analysis of the OECD Facility-Level Database", ENV/EPOC/GSP(2004)14/ANN.

consideration in the formulation, planning, decision-making, implementation and evaluation process of development policies (OECD, 2001a).

The domestic context, directly or indirectly, shapes the scope and environmental performance of foreign investments. This context includes adequate environmental regulation and enforcement mechanisms, as well as local human and financial capacity, including the existence of a local business sector. In countries with weak environmental regulation or enforcement, or where environmental externalities are not acknowledged and adequately priced to promote a responsible use of environmental resources, the main local (demand side) drivers to environmentally sound investment may be missing.

Official development assistance, development finance and other public financial flows may help bridge those regulatory, social or market gaps. They can do so, for example, by providing funding to build capacity in the areas of environmental policy and enforcement as well as in the area of domestic corporate social responsibility. Similarly, most forms of public-private partnerships may provide incentives or sources of funding for local capacity building.

### *Types of environmental impacts*

The level of country income (as a proxy for development), the types of environmental impacts and international aid policy responses are all inter-linked. First, environment does not appear to be a high priority on the lowest-income country government agendas. Second, higher levels of industrialisation may increase pressure on the environment and demand higher levels of intervention. This can be the result of the “produce first and clean later” approach which has long governed many national development policies. Third, increasing incomes, quality of life, and general human development may help raise environmental awareness and expectations.<sup>40</sup> The fact that economic development often happens to be linked to more open societies may also help to generate the appropriate platforms for mobilisation of funds for environmental purposes.

Environmental damages that result from industrial activities are often readily identified and targeted. They lend themselves to end-of-pipe technology solutions and regulations that are comparatively simple to enforce, particularly in the power generation sector. In the least developed countries, environmental issues tend to be more diffused. Actions to address desertification or deforestation are difficult to define and target as individual projects. The actors are often poor people whose livelihood depends on the use of natural resources rather than industrial infrastructure. Differences in institutional capacities may also induce donors to focus sector-wide or cross-sectoral environment targeted programmes on the higher income group of countries.

Environmental impacts can be categorised according to the type of externality they may generate (Frankel, 2003). Some impacts are local in nature, such as the health hazards involved with the use of certain fuels for indoor cooking.<sup>41</sup> Other impacts have region or nation-wide externalities, such as air or water pollution, while a third category includes transboundary (acid rain) or global (greenhouse gas emissions) impacts.

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<sup>40</sup> This is coherent with the theory of environmental quality as a “normal good” in economic terms, and the indication of income elasticity for public environmental protection expenses (Komen, Gerking and Folmer, 1996, cited in OECD, 2001b).

<sup>41</sup> Especially smoke from indoor cooking fires, which is believed to be 80% of the world exposure to particulates (Frankel, 2002, cite Chaudhuri and Pfaff, 2002). Some 300 000 – 500 000 excess deaths per year may be attributable to effects of indoor pollution in Sub-Saharan countries (Vyas and Mhangla, 2004a).

These broadly defined forms of externalities call for various types of intervention, co-operation and leverage from different actors.<sup>42</sup>

The DAC further differentiates worldwide environment issues related to the “global commons” such as the atmosphere, ozone layer or oceans, which require international approaches, from other issues not directly related to the global commons, e.g., deforestation, desertification, degradation of fresh water that can be dealt with at national or regional levels. Both types interact in their impacts on sustainable development (OECD, 2002).

Related to the level of impact is the matter of integrating the different levels of concern. The growing institutional response in development and environment policy circles alike has been to segregate local and global issues, a fact recognised in DAC studies on aid effectiveness. Another aspect is that of governance. For example, climate change mitigation and adaptation elements require different levels of governance. Most efforts related to climate change so far have focused on global issues, whereas impacts could be area-specific and appropriate responses, e.g., adaptation policies, would need to be tailored at a national, regional or local level.

Of course, also determinant are the developing country’s priorities. Environment priorities are often dominated by health and loss of income considerations and therefore are local or national concerns. According to a survey by the Asian Development Bank in 1997, climate change is tenth on the list of environmental priorities of Asian governments after water pollution, fresh water depletion, air pollution, deforestation, solid waste, soil erosion, biodiversity loss, wildlife loss, fish depletion and desertification. As summarised by one author, “the priorities in China are first local, then regional, and last global” (Gupta, *et al.*, 2001).

### ***Growth and environment: the example of the electricity sector***

One example of the linkages between growth and environment is the electricity sector. Generally, as economies grow and mature, demand for electricity increases. Financial and technical decisions affecting power development in rapidly growing economies have significant implications for local and global environments. The power sector also faces huge challenges as social and technical difficulties are combined with financial hurdles.

In this context, China has benefited considerably from bilateral and international aid programmes aiming at environmental improvement. (Gupta, *et al.*, 2001). The concentration in several coastal and urban areas of an industrial base developed with low energy efficiency and high environmental impact created pockets of local pollution affecting health, productivity and sustainable use of natural resources, such as water. This concentration led to project-based, end-of-pipe retrofitting of old equipment that has been a major emphasis of aid allocation. China probably also benefited from its late entry (compared with other large developing countries) in the world economy and recipient community, at the time when the environmental detriments of its industrial base became more obvious. Concomitantly, China received major international support for energy conservation programmes in rural and township enterprises and for research in coal combustion. This resulted in improved efficiency and a cleaner environment (OCDE, 1996). At the same time, China’s ability to attract FDI allowed the import of new process-based efficient technologies, a constant feature of China’s foreign investment policies since the economic opening which occurred in the mid 1980s.

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<sup>42</sup> Intervention can be at various levels. For example, sometimes, international co-operation will be necessary to tackle local problems, if the solution to these problems requires technology transfer or adaptation of imported technologies to local needs.

The electric power sector is a strategic asset for growth. It often mobilises large portions of government budgets (see Box 5 below). When public financing (including domestic funds and ODA) becomes scarce, governments have often turned to the private sector. In a number of developing countries, the need to appeal to private investment has been a prime motivator for restructuring of the electricity sector. While the form of opening the sector to domestic and foreign private capital has varied, experience from Mexico, Brazil, India and China shows that market reforms were accompanied by improved energy efficiency at production and transmission stages (particularly in China and India), and increased use of “cleaner” technology (Tongia, 2003; Zhang and Heller, 2004). In this manner, foreign investment brought environmental benefits since most advanced energy technologies come from industrialised countries and sector reforms have rarely incorporated provisions for home-grown technological innovation.

The troubled financial situation of the state-owned electricity generating systems in India and China, pushed for reforms in order to seek alternative sources of finance, be it mobilisation of domestic resources or foreign funds. This was assisted by conditional loans based on market reform from multilateral development banks. The emphasis on market-oriented reforms, particularly in Brazil and India, brought the cost structure of investment under scrutiny. It highlighted both the potential opposition between return on investment and environmental considerations, and the crucial importance of market regulators as opposed to administrators to balance the equation through internalisation mechanisms.

#### Box 5. Electric power sector investment “needs” in developing countries

Over the next thirty years, USD 16 trillion will be needed, under a business-as-usual scenario, in order to meet expected new demand, and to refit and replace obsolete power generation facilities. Developing countries will account for half of the energy infrastructure investment, a key driver for development. Almost all the growth in energy production will occur in developing and transitions countries.

The rapidly expanding economies of China, Brazil and India face increasing demands for energy. At the same time, they are confronted with pressing local environmental problems such as impacts on human health and on productivity costs due of urban pollution and losses in crop productivity due to regional air pollution. Outside of the OECD, these countries are among the largest and most rapidly growing contributors to greenhouse gas (GHG) emissions. China is the world's second largest GHG emitter accounting for 13.7% of global emissions in 2002. Burning coal accounted for 79.5% of China's CO<sub>2</sub> emissions. China is the world's largest consumer of coal, with the power sector accounting for more than 30% of total coal intake and 45% of China's CO<sub>2</sub> emissions. In India, the power sector accounts for 51% of CO<sub>2</sub> emissions. Clearly the environmental performance of investments in the energy sectors of these countries has a significant influence not only at local and regional level, but also implications for the global environment.

The environmental footprint of electricity investment is potentially very large in the context of rapid growth in some developing economies. China's per capita electricity consumption was one-tenth the per capita level in the United States in 2001, yet China has the world's second largest generating capacity and has experienced a 204% increase in its GDP from 1990 to 2002. China is expected to account for 20% of the additional energy demand. Its corresponding investment share, however, should be lower than that due its reliance on domestic coal, which is a relatively low capital intensive fuel under the current climate change regime.

Source : OECD/IEA, 2003, 2004.

These issues are particularly important in the context of the slow capital turnover that is typical of energy infrastructure. Long capital stock turnover in the power sector underscores the crucial links between long-term development and climate change trajectories since technology choices made today will have long term impacts. Large and stable foreign financial flows, public and private, articulated with national policies that recognise industry dynamics are key to international environment and climate change efforts, and are also needed to unlock developing countries' environment and climate adverse growth trajectories (Mathy, 2002).

### *Domestic environmental laws and enforcement*

There is a clear relationship between foreign direct investment and quality of institutional governance (OECD, 2002a). It would be interesting to investigate possible linkages between investment attractiveness and environmental performance by comparing the performance of FDI policies (for example, using the “Investment Compass” compiled by UNCTAD) and environmental performance in host countries. Presently, a lack of consistent environmental data across countries and the difficulty to compile them into meaningful aggregated indicators do not allow such an approach.<sup>43</sup>

Local and global environments can be affected by routine macro level decisions taken by national policy-makers. This is especially relevant in the poorest countries, where growth is generally higher on government agendas than environment. “Win-win” situations are much more likely if, and when, the environmental dimension is incorporated into economic growth strategies and other development policies. One important step may be the development of indicators incorporating environmental considerations (*e.g.*, natural resource depletion or pollution damage) into national accounting (Munasinghe, 2001).

In most instances, environment is poorly integrated into mainstream economic or sectoral policy reform processes. Administrations in charge of “environmental affairs” are generally ill-equipped and under-budgeted. Often not of ministerial status, such organisations often cannot exercise a cross-sectoral mandate because of a lack of consistent and aggregated meaningful indicators, political clout and integration in general decision making-processes (OECD, 2000).<sup>44</sup>

### *Good environmental governance attracts investment*

Domestic environmental policies have a direct effect on the quality and price of natural and human capital and resources. Pollution can affect workers, impact productivity and increase social costs. It can also hinder the relocation of expertise, for example, foreign managers unwilling to work and live in polluted environments (one example is the Sichuan Province, China). Adequate environmental policies also tend to reduce risks to foreign investors, whose business may be adversely affected through worker, consumer or shareholder actions when they operate in areas that are perceived to have lax environmental management. Several studies indicate that the cost of pollution abatement in itself is not a major concern for private companies operating in a reliable institutional framework (Jaffe *et al.*, 1995 cited in Wheeler, 2000).<sup>45</sup> What causes concern is an ever changing or arbitrarily enforced environment framework that can entail high compliance costs and disrupt business, leading to a drying-up of capital sources, or increases in risk premium. Transparency and reliability are very important elements of an enabling environment, since they reduce unexpected compliance risks and costs (OECD, 2002a).

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<sup>43</sup> According to UNEP: “There is a need not just for more data on environmental issues but for standardising data collection and storage, and making it accessible at technical and managerial levels. Reports may be located in different bodies between which there is little or no co-operation or exchange, resulting in gaps, duplication and limited use of data. This, in turn, hinders policy development, planning, implementation, and follow-up. Even where adequate data are available, there may be incompatibility between different agencies and different countries. Networking and integration of data for environmental assessment are at a very early stage in some regions.” (UNEP, 2000).

<sup>44</sup> This also seems to be the case for donor countries where “assistance organisations still appear to be less effective in capacity development related to environment than at other types of ODA” (OECD, 2000).

<sup>45</sup> Some case studies, however, suggest that there is indeed empirical support to anecdotal evidence that high local environment stringency and investment attractiveness of a location are inversely related. But the issue is more related to spatial heterogeneity in regulation than to an alleged “race to the bottom” (List and Co., 2000).

Contrary to what might be expected, companies may seek investments in locations where environmental laws and enforcement are strong. A recent World Bank survey indicated that 61% of firms supported the view that strong laws on corporate social responsibility (including environment) make it easier to conduct business, and strong enforcement attracted 75% positive responses. The survey suggests that the practices of local partners rank equally important to country-wide regulations, suggesting positive environmental spillovers (World Bank, 2003).<sup>46</sup> However, another survey showed that environmental regulations are not cited on the top ten list of critical location factors by firms (MIGA, 2002).

*Enforcement: formal and informal processes*

Of course, having domestic environmental policies and regulations in place is not enough to improve the environmental performance of investments. Transparency, implementation and enforcement are also critical factors. There can be huge gaps between enacted environmental legislation and the institutional and technical capacity to monitor performance and enforce regulations. This can translate into a burden for investors or increased costs associated with adaptation to wayward enforcement. Environmental regulations are often based on western standards and experience and may lack domestic support. For example, in China, the 500 environmental laws are locally referred to as “soft laws” (Gupta *et al.*, 2001).

Legal, human and general institutional capacity and absence of corruption are often cited as prime factors influencing the effectiveness of aid. This holds for the effectiveness of environmental policies, be they command-and-control or market-based instruments.<sup>47</sup> Assessing local governance and ways to improve institutional capacities has been a focus of development community involvement with developing country governments on environment issues (OECD, 1995, 1997, 2002e and CEC, 2003).

One study on China demonstrates contrasts in bargaining power with levying of pollution charges. State-owned enterprises seem to have a higher bargaining power with the regulator and enforcer (*i.e.*, their shareholder - the State) than the private sector. State-owned enterprises, which often undertake unprofitable large infrastructure developments, can be the most polluting because of lower technological standards (Hua Wang *et al.*, 2002). In the electricity sector in India and China, the state-owned power generation companies have significant political influence. This makes it difficult to pass and enforce laws and regulations that cover what have been historically the largest polluters, while the more diverse pollution source of car emissions are heavily controlled (Gupta *et al.*, 2001). Further study is needed to demonstrate causal linkages between lax enforcement and the characteristics of firms, such as capital ownership, size or financial situation, which can be an important bargaining factor in countries where fear of unemployment, particularly for rural enterprises may fuel migration to the larger cities.

Some firms may resist enforcement due to low financial capacity to respond to environmental pressures which can be perceived as “non-core business” issues. Another important factor for non-compliance is

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<sup>46</sup> Local business environmental practices appear not to influence the extractive industry, where local spillover effects are minimal and which tend to deal on a “firm to state” basis and through “political deals” with governments.

<sup>47</sup> Corruption is one of the main reasons for failures of such market-based instruments, according to Karsenty. Taking the example of the tropical forest in Africa, he describes how “rights” markets often led to “selling rights”, instead of “selling goods”, where the development impact is nil. This seems to be the case with most natural resource-based economies in Africa, prone to corruption, civil war over resources grabbing, environment disasters, and illegal exploitation. The World Bank Extractive Industry Report also questions the ability of the extractive industry and its backers to transform resource wealth into development in low capacity circumstances.

concern about competitors' advantage. Here, transparency helps create a level-playing field by exposing free-riders to industry competitors, enforcers and the general public.

Even with weak environmental standards, community pressure can play a role. It can be exercised in many ways, depending on the legal, social, educational and political background. In the absence of formal environmental regulation, or when enforcement is weak, community pressure can be very effective, using approaches such as publicity, legal proceedings, compensation deals, etc.<sup>48</sup> A study of 1 500 Chinese firms shows that, in a policy environment defined by both command-and-control measures and market mechanisms, and, sometimes, weak enforcement, community influence can be as effective as pollution laws (Pargal *et al.* 1996). Another empirical study confirms the important role of public pressure in China (e.g., through the inspections they trigger) and suggests that public information and education is a pillar of environment policy implementation (Dasgupta, Laplante and Mamingi, 1999).

Stakeholder engagement is a powerful lever to improve environmental management at the national and enterprise levels. A number of guidelines, policies and voluntary initiatives recognise public participation from the design stage of a project as an important element of sustainable business practice strategies.<sup>49</sup> Stakeholders' participation can also play a critical role in encouraging states to comply with their own regulation or international commitments (Victor *et al.*, 1998). To make this participation effective, information access, transparency and accountability are essential (OCDE, 2000).

In most developing countries, there is less pressure from consumers, stakeholders and market forces to comply with environmental regulations than in industrialised countries. However, pressure to comply in developing countries may apply through the codes and practices of multinational businesses and global market pressure, such as that from NGOs and shareholders (UNCTAD, 2002).

## 5. Joining forces to promote sustainable investment in developing countries

As noted previously, there is a general recognition that governments alone cannot solve development challenges. Therefore, co-operation between different stakeholders – governments, business, civil society – are increasingly important and a variety of forms of co-operation have developed.

This section describes three types of co-operation mechanisms to promote investments that contribute to sustainable development in developing countries. One form of co-operation are *public-private partnerships*, which, involve enterprises and, often, development agencies and civil society organisations. The second form of co-operation refers is the support of development agencies to strengthen corporate responsibility of the domestic business sector. These forms of co-operation respond to the call at the WSSD to promote corporate responsibility and public-private partnerships to support sustainable development (see Box 6). The third form, which does not involve official development funds, is a specific mechanism to promote investment to support implementation of the UN Climate Change Convention in developing countries: the Clean Development Mechanism established under the Kyoto Protocol.

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<sup>48</sup> The ability of communities to influence the environmental performance of local factories in both strong and weak regulatory frameworks in Asia and Latin America is reported in anecdotal evidence in "Racing to the Bottom" (Wheeler, 2000). In one instance, a cement factory in Jakarta compensated local communities for dust generation by a lump sum payment and a can of concentrated milk every month (Cribb, 1990).

<sup>49</sup> Examples include the OECD DAC Guidelines on Aid and Environment series, the World Bank Safeguard Policies; the Global Mining Initiative; and the Equator Principles.

**Box 6. Good governance, corporate responsibility and sustainable development**

Extracts from the WSSD Plan of Implementation:

“Good governance within each country and at the international level is essential for sustainable development. At the domestic level, sound environmental, social and economic policies, democratic institutions responsive to the needs of the people, the rule of law, anti-corruption measures, gender equality and an enabling environment for investment are the basis for sustainable development” (paragraph 4).

[Urgent action is needed to ] “Actively promote corporate responsibility and accountability, based on the Rio principles, including through the full development and effective implementation of intergovernmental agreements and measures, international initiatives and public-private partnerships and appropriate national regulations, and support continuous improvement in corporate practices in all countries” (paragraph 49).

Source: WSSD, [www.johannesburgsummit.org](http://www.johannesburgsummit.org).

***Public-private partnerships***

One of the recommendations of the Plan of Implementation agreed at the WSSD in Johannesburg was to “enhance partnerships between governmental and non-governmental actors, including all major groups, as well as volunteer groups, on programmes and activities for the achievement of sustainable development at all levels”. Partnerships between the private and public sector have existed for decades, but in recent years, the concept of “public-private partnerships” (PPP) has increasingly been employed as a means to contribute to growth and sustainable development.

According to a broad definition of public-private partnerships, they are of a voluntary, self-organizing nature and can be arranged among any combination of partners, including national governments, regional groups, local authorities, NGOs, international institutions and private sector partners. They are intended to complement intergovernmental commitments and not to be a substitute for them.<sup>50</sup>

The 2005 OECD report to Ministers on “Mobilising Investment for Development” acknowledges the importance of ODA in providing direct support for investment in developing countries. According to that report, the main channels through which ODA can enhance the effectiveness of public-private partnerships, and thus contribute to a more socially and commercially satisfactory outcome are summarised below.<sup>51</sup>

*Risk mitigation.* Most foreign investors already have access to market-based insurance against risks such as “regulatory takings” through home country export credit agencies and multinational bodies such as the Multilateral Investment Guarantee Agency (MIGA). However, risks go well beyond this and they are so high in some cases that PPPs are unlikely to take place in the absence of subsidised risk mitigation. A kind of risk that has attracted particular attention in the aftermath of the financial crises of the 1990s is currency risk. Some contracts are written to allow investors to collect tariffs or fees in international currencies, but in the event of a currency crisis they are often rendered unenforceable. A case can be made for development agencies to provide extra risk coverage, benefiting *inter alia* from the fact that they (unlike more market-based insurance schemes) partner directly with the authorities in developing countries.

<sup>50</sup> These partnerships are known as “Type II initiatives” in the WSSD Plan of Implementation. “Type I” initiatives are intergovernmental commitments in the context of international environmental conventions. See WSSD Plan of Implementation, [www.johannesburgsummit.org](http://www.johannesburgsummit.org).

<sup>51</sup> See also the Annex to the 2005 report to Ministers “Encouraging public-private partnerships in developing countries” [DAF/INV/WP(2004)4/ANN4/REV1].

### Box 7. Examples of PPPs

#### Promoting sustainable production in Algeria

In 2000, the German detergent producer Henkel acquired what had previously been the nationalised Algerian detergent and cleaner manufacturer ENAD. This was the first major privatisation in Algeria after some ten years of civil war. Serious problems with product quality and the speed and reliability of deliveries quickly emerged, not only at the subsidiary ENAD but also with local suppliers. Modern management methods were largely unknown. Safety and environmental standards were not even close to the usual level at Henkel. For this reason, the German company planned training in industrial safety, health and environmental protection and supply chain management. Public agencies (such as the labour and environmental protection agencies) and suppliers were included in this. Under a commission from the German Federal Ministry for Economic Cooperation and Development (BMZ), the German aid agency GTZ helped Henkel organise workshops and seminars for selected Algerian firms and parts of the public administration. In this way, employees were introduced to modern methods of supply chain management and the fields of industrial safety, health and environmental protection.

Source: GTZ, [www.gtz.de](http://www.gtz.de).

#### Improving electricity supply in a Tanzanian village

ABB, a leading supplier of power and automation technologies, and WWF, the global conservation organization, teamed up to provide electricity and contribute to the sustainable development of the 1,800-strong village of Ngarambe, on the edge of the Selous National Park, in Tanzania. Under ABB's "Access to Electricity" program, power from a diesel-fired generator is now lighting up the school, dispensary, local government office, mosque, small businesses on the main road and a number of homes. The electricity – which is cheaper and cleaner than the kerosene used until now – is on for four hours a day after dusk. ABB financed the installation of the mini-grid. The villagers contributed to lowering costs by building the generator house and digging trenches for power cables.

ABB focuses on the productive use of electricity in order to generate economic growth and social progress. Concretely, ABB supplied the generator, installed underground cables and low-voltage equipment, and trained local people to run the power supply. WWF provides guidance on issues ranging from reducing deforestation and sustainable forestry to health care and environmental education, their contribution to going further than just supplying electricity.

Source: WBCSD, [www.wbcsd.org](http://www.wbcsd.org).

#### Providing training in China to combat ozone depletion

Half of the world's emissions of ozone depleting chemicals originate in China. In order to help solve this serious global environmental problem, Swedish experts have trained Chinese enterprises to use a new technology. The aim of the project is that the use of ozone-depleting solvents shall decrease and, in the long term, shall cease.

The Swedish programme targeted the four thousand Chinese enterprises that use ozone-depleting solvents. Three quarters of the emissions in China are from small and medium-size factories in the electronics, precision mechanics and engineering sectors. To remedy the problem, technical expertise must be enhanced throughout the sector.

The project was implemented by the United Nations Development Programme, UNDP, with the aid of a team of Swedish experts from industries and government agencies under the leadership of the Swedish Institute for Engineering Research. Links have been established with representatives of the Chinese environmental protection agency (SEPA), local and provincial environmental authorities and the ministries concerned, in order to facilitate dissemination of information on the technologies.

Source: SIDA, [www.sida.se](http://www.sida.se).

*Technical assistance and capacity development.* ODA can be used to fund a host of educational and experience-exchange programmes to build authorities' capacity to deal with PPPs, including contract negotiation. An alternative to building capacities in-house is to support the outsourcing of regulatory functions to external specialists. A recent survey indicates that as many as three fourths of national regulators contract out certain tasks to external parties.

*Output-based aid.* Even if host country regulatory capacities and risks can be dealt with satisfactorily, a number of infrastructure projects will have positive economic but negative financial rates of return. This gap can be bridged by ODA, for instance through targeted subsidies to the service providers or by subsidising consumption during a transitory period to full cost recovery pricing. Such “output-based aid” can be highly effective in meeting specific targets – contingent upon the clarity of objectives and project design. Several development agencies provide grant-based instruments to promote cost-recovery pricing while supporting those least able to pay the full price for services.

### ***Strengthening corporate responsibility of domestic businesses in developing countries***

The business sector in developing countries has an important role to play in contributing to sustainable development. Therefore, enhancing the capacity of domestic enterprises to incorporate sustainable business practices and that of other developing countries actors to support and monitor these operations is key. Several development agencies now have private sector development programmes, and within those, some focus specifically on ways to enhance the contribution of local business to the achievement of environmental objectives.

According to the recent brochure by the UK’s aid agency, “DfID and Corporate social responsibility”, governments and development agencies can do a lot to make sure conditions are right not only for investment, but also for making investments more responsible. Businesses can also act responsibly in different situations where foreign capital has distorted political processes. Governments and development agencies can:

- Regulate against persistent poor performance or towards increased openness;
- Facilitate processes, information and co-operation to bring about changes to the poor;
- Form partnerships with businesses and civil society, where each partner uses its specific skills or knowledge to tackle problems; and
- Endorse best practice and transparency

Some donor agencies have specific programmes to enhance corporate responsibility in support of development goals. Box 8 below summarizes the USAID programme to enhance governance in the energy sector.

According to the German development cooperation agency, GTZ, the issue of corporate social responsibility (CSR) is today on the agendas of businesses, ministries and international organisations. The adoption of social and ecological responsibility is increasingly recognised as the foundation for sustainable corporate management. The central argument for CSR is, in addition to ethical considerations, the "business argument" – raising corporate economic performance levels through socially and ecologically sustainable corporate policy. There are many advantages: proactive risk prevention, investment in the future, and a good reputation with employees, customers, investors, policy-makers and the public. ([www.gtz.de](http://www.gtz.de)).

### Box 8. USAID's energy sector governance programmes

USAID's energy sector governance programmes aim at increasing economic growth and reduce poverty by changing the way governments, businesses, and civil society work with each other in the energy sector. Creating the conditions for economic growth and poverty reduction requires increasing access of people and business to modern energy, and increasing the affordability of energy for consumers.

USAID's energy sector governance programmes focus on three dimensions of sector governance:

- **Good Governance:** this involves working with governments to assist them in understanding the commercial nature of energy, the range of options for governmental administration of the sector, and to help them promote private sector-led economic growth.
- **Corporate Governance:** the purpose is to help developing country enterprises change from politically based operations to commercial operations.
- **Public Understanding and Participation:** this aims at increasing customers' knowledge of, and participation in the social, legal, financial, and commercial conditions required for provision of energy services.

Source: USAID, [www.usaid.gov](http://www.usaid.gov).

In 2004, the International Institute for Environment and Development (IIED) organised a workshop to explore how donor agencies are supporting and enabling corporate social responsibility. The workshop recognized development co-operation agencies activities to enhance corporate responsibility. Besides providing financial and technical assistance, donors can also provide recognition of, and incentives, for responsible business practices, particularly in developing countries; convene dialogue and nurture relationships for further action; and require companies to demonstrate adherence to responsible business practices as part of their grant-making activity (IISD, 2004). The following suggestions for development co-operation agencies to further promote and enable corporate responsibility emerged from the workshop.

*Build responsible practices into development agencies' own activities.* Agencies would therefore provide an example and create incentives for responsible private actions. Activities could include:

- Adhering to rigorous standards.<sup>52</sup>
- Integrating corporate responsibility issues into lending and procurement processes.
- Developing corporate responsibility and cross-sector partnership resources and expertise.<sup>53</sup>
- Forging closer links between governments and responsible industry representatives.
- Simplify policy documents to make them accessible to the business community and others.

*Build government capacity and public governance frameworks.* Donors can help developing country governments create the conditions for responsible business behaviour by strengthening public governance frameworks. This could include:

- Strengthening the capacity to implement and enforce existing laws and guidelines.<sup>54</sup>

<sup>52</sup> The Agence Française de développement has signed up to the UN Global Compact, and various agencies, e.g. the Canadian CIDA, follow the OECD Guidelines for Multinational Enterprises.

<sup>53</sup> The IFC has created a Corporate Citizen Facility in response to the increased demand for guidance and support from companies in relation to environmental and social performance, [www.ifc.org](http://www.ifc.org).

- Strengthening revenue management mechanisms and increasing transparency in order to attract FDI and the revenues invested in social and economic development.
- Strengthening financial markets and corporate governance.

*Build the capacity of local private sector, labour and civil society organisations, including intermediaries.* In addition to building government capacity, donor agencies can also support other institutions that contribute to an enabling environment for responsible business activity in developing countries. This could include:

- Support to labour unions, business associations and civil society organizations.
- Supporting multi stakeholder dialogue.<sup>55</sup>
- Recognising and sharing good practice.<sup>56</sup>

*Relate the corporate responsibility debate to SMEs and domestic enterprises.* Discussions about CSR largely take place in the United States and Western Europe, and relate mostly to activities of large companies operating in international markets. Donor agencies can help focus the debate on small and medium-sized enterprises (SMEs), the informal and the domestic business sectors in developing countries. Activities could include:

- Supporting the development of responsible SMEs.
- Encouraging business links between MNEs and the domestic private sector.<sup>57</sup>

*Invest in human capacity and leadership.* Effective development activity and successful business activity are highly dependant on the leadership of capable individuals. Therefore, in addition to building the capacity of enterprises and related institutions in developing countries, there is also need to invest in individuals. Activities can include:

- Training in corporate responsibility and cross-sector partnership.<sup>58</sup>
- Develop brokerage capacity to bring together relevant actors, create alliances and partnerships.<sup>59</sup>
- Using convening power to encourage leadership as a platform for developing new partnership.s<sup>60</sup>

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<sup>54</sup> CIDA (Canada) is working with the Association of Latin American State-Owned Companies to improve dialogue between governments, industry and indigenous groups to strengthen capacity to develop and implement environmental protection and management practices.

<sup>55</sup> GTZ (Germany) has established a series of roundtable dialogues to establish codes of conduct for entire industry sectors (e.g., the textile and coffee sectors). [www.gtz.de](http://www.gtz.de).

<sup>56</sup> The Dutch government has created the “CSR stimulation award” for companies in the Dutch agribusiness and food industry.

<sup>57</sup> DfID (UK) has created ‘challenge funds’, which provides grants to enterprises that help to develop sustainable business links with companies in developing countries, [www.dfid.gov.uk](http://www.dfid.gov.uk).

<sup>58</sup> USAID’s Partnering with Business Project, which focuses on energy sector governance, includes numerous training activities to actors, including business in developing countries, [www.usaid.gov](http://www.usaid.gov).

<sup>59</sup> CIDA (Canada) is working with UNDP to develop a mechanism that supports two-way information exchanges and partnerships between various actors in developing and developed countries, [www.cida.ca](http://www.cida.ca).

<sup>60</sup> The Swedish Partnership for Global Responsibility promotes corporate social responsibility based on internationally agreed principles.

***A tool to support sustainable investment in developing countries: the CDM***

Most assistance for climate change mitigation activities has come from the public sector, while private investment specifically for climate-friendly projects has been rather low. The three flexible mechanisms under the Kyoto Protocol (Joint Implementation, Emissions Trading, and Clean Development Mechanism) were designed to improve the situation. While helping Annex I countries<sup>61</sup> to meet their Kyoto emissions targets at lower cost, the mechanisms should also facilitate private investment to assist non-Annex I countries in achieving sustainable development.<sup>62</sup>

Under the Clean Development Mechanism (CDM), defined in Article 12 of the Kyoto Protocol, Annex I Parties can implement projects that reduce emissions in a non-Annex I country, thereby generating certified emission reductions (CERs). The CERs can be used by Annex I Parties to meet their emission targets under the Kyoto Protocol. Developing countries are expected to particularly benefit from private investment through transfers of environmentally-friendly technology.<sup>63</sup> Proposed CDM projects include a relatively wide spread of activities and host countries. However, anticipated emission reductions from CDM project activities will likely be concentrated in three sectors (renewable electricity generation, reduction of methane emissions, and replacements of ozone depleting substances) and in a few countries (e.g. India, Brazil, China and Indonesia).<sup>64</sup>

The CDM has the potential to change investment patterns and to introduce new and competitive advantages for private investment. It is expected to generate investment in developing countries, especially from the private sector, and promote the transfer of environmentally-friendly technologies. The sale of CERs offers the prospect of recovering part of the additional investment costs associated with climate-friendly investments. In addition, the CDM provides incentives for private investment by offering cost-effective abatement options and new business opportunities while allowing each country to take region and country-specific institutional realities into consideration (WBCSD, 2004).

The success of the CDM will depend, in part, upon the amount of investment it is able to stimulate in GHG mitigation activities. Taking public and private sources of CDM investment into account, CDM financing to 2012 is likely to be more than USD 1 billion. However, these flows of CDM related funds are likely to be only a small fraction of FDI and ODA flows. Nevertheless, such funds may have the potential to leverage six to eight times the amount – or about 6-8 billion USD of investment capital towards GHG mitigation activities.<sup>65</sup>

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<sup>61</sup> The countries listed in Annex I of the UNFCCC (as amended at the 3<sup>rd</sup> Conference of the Parties in December 1997) are: Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, the European Community, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, and United States of America.

<sup>62</sup> UNFCCC, Issues, Kyoto Protocol Mechanisms, <<http://unfccc.int>>.

<sup>63</sup> <[http://unfccc.int/kyoto\\_mechanisms/cdm/items/2718.php](http://unfccc.int/kyoto_mechanisms/cdm/items/2718.php)>.

<sup>64</sup> Ellis *et al.*, OECD/IEA (2004), Taking Stock of Progress under the Clean Development Mechanism (CDM).

<sup>65</sup> Ellis *et al.*, OECD/IEA (2004).

**Box 9. The CDM: contributing to sustainable investments in developing countries**

Over 100 000 low-income households living in rural, rice-farming regions of Vietnam and China rely upon family -hydro (between 100 and 200W capacity) as the only affordable means of obtaining electricity. These systems are used for domestic lighting, radio and, in some cases, televisions. The units are small, cheap and are usually installed and owned by a single family. Family-scale hydro is one of the renewable energy options that can reduce CO<sub>2</sub> emissions.

A DFID-funded pilot project aimed to stimulate the market for small -hydro amongst low-income households by drawing on CDM funds to buy-down the costs of the installation. The project found that 'carbon finance' could reduce family-hydro costs to end users by up to 15% in the Philippines, where rural households consume much more kerosene and diesel than in Vietnam. This reduction in costs would encourage the market to improve the quality of the pico-hydro technology<sup>66</sup> so that the units last longer and are more reliable for poor households. At the same time they would reduce the country's dependence on non-renewable and imported fossil fuels.

Source: DFID, [www.dfid.gov.uk](http://www.dfid.gov.uk).

## 6. Main findings and ways forward

### *Mainstreaming environment in the "supply side" of financial flows*

A variety of different goals and rules guide foreign private and public financial flows to developing countries. Yet, at some level the environmental consideration for both public and private financing of projects is converging, as reflected in the following developments:

- Infrastructure and energy projects, among others, can have high potential environmental impacts. In addition, there are risks specific to the country and the sector, so investment in such projects often entail a pivotal role for public (domestic or international) funds.
- Large projects, particularly those that receive multilateral bank funding, are generally subject to an environmental impact assessment and a high level of scrutiny. The most stringent guidelines require compliance with certain environmental standards, consultation, public disclosure and retention of accountability.
- Environmental assessment requirements and guidelines have diffused from multilateral banks (mainly, the World Bank Group) to influence the practices of bilateral donors and private investors. Private financial institutions are also following this trend, and are starting to impose environmental requirements on projects for which their support is sought.
- Private investment in developing countries generally is provided in the context of a public guarantee such as that provided by Export Credit Agencies. Such institutions are increasingly incorporating environmental considerations into their lending policies.
- With increasing globalisation, the role of multinational enterprises in shaping the environmental performance of investments is gaining importance.

<sup>66</sup> Pico Hydro projects are hydroelectric projects with power generation capacity of up to 10kW. They generate power by converting energy in water flowing down a gradient into electrical energy. To generate electricity, water from a natural stream flowing down a gradient is tapped at a convenient higher elevation, passed through a water conducting system and then let into a turbine installed at a lower elevation. The turbine drives an electrical generator producing electricity.

There is an evolution of aid modalities underway and how the environmental opportunities and consequences of these approaches will be addressed is not evident at this point. Increasingly international development financing has been moving away from project-based to macro-economic and sector-wide assistance, which is partly designed to create enabling conditions for private capital. While donors generally subject projects to some form of environmental assessment, this is not the case for sector or balance-of-payment support.

Traditional environmental impact assessment tools do not capture the far-reaching effects of such aid. In the next few years, Poverty Reduction Strategy Credits are expected to be the main modality of World Bank lending. Financing is provided on the basis of Poverty Reduction Strategy Papers from the host country. The environmental implications are unclear, but there is a risk that environment will not be effectively considered as evidenced in World Bank evaluations of the Poverty Reduction Strategy Papers.

***Attracting investments that contribute to environmental enhancement: the “demand side”***

Domestic environmental policies have a direct effect on the quality and price of natural and human capital and resources. Pollution can affect workers, impact productivity and increase social costs. It can also hinder the relocation of expertise, for example, foreign managers unwilling to work and live in polluted environments.

The cost of pollution abatement does not appear to be a major concern for private companies. What causes concern is an ever changing or arbitrarily enforced regulatory framework. Transparency and reliability are very important elements of an enabling environment, since they reduce unexpected compliance risks and costs.

Adequate environmental policies also tend to reduce risks to foreign investors, whose business may be adversely affected through worker, consumer or shareholder actions when they operate in areas that are perceived to have lax environmental management.

Stakeholder engagement is a powerful lever to improve environmental management at the national and enterprise levels. A number of guidelines, policies and voluntary initiatives recognise public participation from the design stage of a project as an important element of sustainable business practice strategies.

A variety of mechanisms have been developed which can contribute to promoting private investment in developing countries that, in turn, can support sustainable economic development. These include assistance by development assistance agencies to enhance corporate responsibility in domestic businesses, and partnerships between various actors from the public and private sectors. In addition, the Clean Development Mechanism established under the Kyoto Protocol aims at supporting investments in developing countries that contribute to addressing climate change.

***Development, investment and environment: strengthening synergies***

In light of the above findings, further steps to strengthen linkages between investment, development and environment could be taken. Some suggestions are provided below.

Public and private international finance providers use similar tools and standards (generally, World Bank standards) for environmental impact assessment of projects in developing countries. The environmental and developmental impacts of projects, however, can be relatively small when compared to the impacts of assistance backed sector-wide or macro-economic policies. Strategic environmental assessment tools have yet to be elaborated to match the potential development leverage of these activities.

Private flows are by far the largest source of total foreign financial flows to developing countries. This is reinforced by the changing role of ODA from the main source of project finance to facilitating private investment. It is therefore important that FDI delivers not only investment but also sustainable development, and that ODA helps shaping environmentally responsible policies. Development co-operation agencies can support this process by encouraging corporate responsibility among multinational enterprises and domestic business. For example, ODA can help domestic business to integrate environmental practices, through technology and technical expertise spill-overs, and also through exposure to corporate responsibility practices. ODA programmes can engage foreign private investment in creating partnerships and alliances to ensure socially and environmentally responsible business practices.

The shift in the modalities of assistance and lending entails the need to adapt environmental impact assessment and other management tools from project evaluation to the macro-economic scale. The empowerment of host countries over their development objectives in the context of “development ownership” also needs to recognise the critical links between development (or poverty reduction) and environment. In order to better articulate development and environment objectives, emphasis should be put on building the appropriate national capacities to manage incoming financial flows through, *inter alia*, target definition, regulation, rules enforcement, and stakeholder engagement.

Having domestic environmental policies and regulations in place in host countries does not always necessarily improve the environmental performance of investments. In many developing countries, some of the most polluting industries are state-owned, which may make it difficult to pass and enforce laws and regulations that would require investments for which public funds may not be available. Reforms aiming at adequate pricing of natural resources may be difficult to implement without aid to help smooth the transition towards full reform. ODA may help to bridge gaps and attract private investment in financially risky areas, such as privatisation of energy or water sectors.

## ANNEXES

## Annex 1. DAC list of aid recipients (as at 1 January 2003)

Part I: Developing Countries and Territories (Official Development Assistance)					Part II: Countries and Territories in Transition (Official Aid)		
Least Developed Countries (LDCs)	Other Low-Income Countries (Other LICs) (per capita GNI < \$745 in 2001)	Lower Middle-Income Countries (LMICs) (per capita GNI \$746-\$2975 in 2001)		Upper Middle-Income Countries (UMICs) (per capita GNI \$2976-\$9205 in 2001)	High-Income Countries (HICs) (per capita GNI > \$9206 in 2001)	Central and Eastern European Countries and New Independent States of the former Soviet Union (CEECs/NIS)	More Advanced Developing Countries and Territories
Afghanistan Angola Bangladesh Benin Bhutan Burkina Faso Burundi Cambodia Cape Verde Central African Republic Chad Comoros Congo, Dem.Rep. Djibouti Equatorial Guinea Eritrea Ethiopia Gambia Guinea Guinea-Bissau Haiti Kiribati Laos Lesotho Liberia Madagascar Malawi Maldives Mali Mauritania Mozambique Myanmar Nepal Niger Rwanda Samoa Sao Tome and Principe Senegal Sierra Leone Solomon Islands Somalia Sudan Tanzania Timor-Leste Togo Tuvalu Uganda Vanuatu Yemen Zambia	*Armenia *Azerbaijan Cameroon Congo, Rep. Côte d'Ivoire *Georgia Ghana India Indonesia Kenya Korea, Democratic Republic *Kyrgyz Rep. *Moldova Mongolia Nicaragua Nigeria Pakistan Papua New Guinea *Tajikistan *Uzbekistan Viet Nam Zimbabwe	*Albania Algeria Belize Bolivia Bosnia and Herzegovina China Colombia Cuba Dominican Republic Ecuador Egypt El Salvador Fiji Guatemala Guyana Honduras Iran Iraq Jamaica Jordan *Kazakhstan Macedonia (former Yugoslav Republic) Marshall Islands Micronesia, Federated States Morocco Namibia Niue	Palestinian Administered Areas Paraguay Peru Philippines Serbia and Montenegro South Africa Sri Lanka St Vincent and Grenadines Suriname Swaziland Syria Thailand Guyana Tonga Tunisia Turkey *Turkmenistan Wallis and Fortuna	Botswana Brazil Chile Cook Islands Costa Rica Croatia Dominica Gabon Grenada Lebanon Malaysia Mauritius Mayotte Nauru Panama St Helena St Lucia Venezuela  ----- Threshold for World Bank Loan Eligibility (\$5185 in 2001) ----- ▪ Anguilla Antigua and Barbuda Argentina Barbados Mexico ▪ Montserrat Oman Palau Islands Saudi Arabia Seychelles St Kitts and Nevis Trinidad and Tobago ▪ Turks and Caicos Islands Uruguay	Bahrain	*Belarus *Bulgaria *Czech Republic *Estonia *Hungary *Latvia *Lithuania *Poland *Romania *Russia *Slovak Republic *Ukraine	▪ Aruba Bahamas ▪ Bermuda Brunei ▪ Cayman Islands Chinese Taipei Cyprus ▪ Falkland Islands Polynesia ▪ Gibraltar ▪ French Polynesia ▪ Hong Kong, China Israel Korea Kuwait Libya ▪ Macao Malta ▪ Netherlands Antilles ▪ New Caledonia Qatar Singapore Slovenia United Arab Emirates ▪ Virgin Islands (UK)

\* Central and Eastern European countries and New Independent States of the former Soviet Union (CEECs/NIS).

▪ Territory.

## Annex 2. Net flow of long-term financial resources from DAC countries to developing countries

This Table, extracted from DAF/INV/WP(2004)4/ANN1/REV1, shows the total net flow of long-term financial resources from DAC countries to developing countries and multilateral organisations providing development assistance, by type of flow.

	USD million					Net disbursements at current prices and exch							
	1987-1988 average	1992-1993 average	1999	2000	2001	2002	2003	1987-1988 average	1992-1993 average	1999	2000	2001	2002
<b>I. Official Development Assistance</b>	43 834	58 318	53 233	53 749	52 435	58 292	69 029	60	48	28	40	49	80
1. Bilateral grants and grant-like flows	23 479	34 133	33 931	33 040	33 522	39 813	50 965	32	28	18	25	31	54
of which: Technical co-operation	9 043	13 279	13 036	12 767	13 602	15 452	18 366	12	11	7	9	13	21
Developmental food aid (a)	1 745	1 723	1 045	1 180	1 007	1 086	1 196	2	1	1	1	1	1
Emergency & distress relief (a)	704	2 918	4 414	3 574	3 276	3 869	5 874	1	2	2	3	3	5
Debt forgiveness	240	2 849	2 277	2 045	2 514	4 534	8 338	0	2	1	2	2	6
Administrative costs	1 541	2 503	3 049	3 083	2 964	3 027	3 524	2	2	2	2	3	4
Bilateral loans	6 956	6 756	3 912	3 024	1 602	939	-1 153	10	6	2	2	1	1
3. Contributions to multilateral institutions	13 399	18 364	15 390	17 685	17 311	17 540	19 217	18	15	8	13	16	24
of which: UN (b)	3 251	4 425	3 654	5 185	5 233	4 634	4 705	4	4	2	4	5	6
EC (b)	2 275	4 207	5 017	4 950	4 946	5 695	6 834	3	3	3	4	5	8
IDA (b)	4 762	5 636	2 834	3 672	3 599	3 279	3 120	7	5	1	3	3	4
Regional development banks (b)	1 897	2 450	1 860	2 187	1 491	1 813	1 734	3	2	1	2	1	2
<b>II. Other Official Flows</b>	3 022	8 567	15 589	-4 326	-1 589	-45	-1 127	4	7	8	-3	-1	0
1. Bilateral	3 181	7 646	14 640	-4 303	-797	2 401	-1 597	4	6	8	-3	-1	3
2. Multilateral	-159	922	949	-23	-792	-2 446	470	0	1	0	0	-1	-3
<b>III. Private Flows at market terms</b>	21 491	49 803	115 999	78 128	49 745	6 252	30 481	30	41	61	58	46	9
1. Direct investment	21 202	33 309	94 314	71 729	66 041	36 286	36 660	29	27	49	53	61	50
2. Bilateral portfolio investment	319	18 396	25 575	2 416	-14 946	-26 902	-6 611	0	15	13	2	-14	-37
3. Multilateral portfolio investment	2 033	-2 297	-5 786	-3 369	-4 086	-3 146	635	3	-2	-3	-3	-4	-4
4. Export credits	-2 064	396	1 896	7 352	2 736	14	-203	-3	0	1	5	3	0
<b>IV. Net grants by NGOs</b>	4 123	5 848	6 715	6 934	7 289	8 765	10 162	6	5	4	5	7	12
<b>TOTAL NET FLOWS</b>	<b>72 470</b>	<b>122 539</b>	<b>191 536</b>	<b>134 485</b>	<b>107 881</b>	<b>73 263</b>	<b>108 545</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

a) Emergency food aid included with developmental food aid up to and including 1995.

b) Grants and capital subscriptions, does not include concessional lending to multilateral agencies.

Source: DAC Members' reporting to the annual DAC Questionnaire on total official and private flows.

**Annex 3. Environmental relevance of industry sectors in the DAC CRS database**

0 = not environmentally relevant ; x = environmentally relevant; N.A = not allocable

SECTORS	ENVIRONMENTAL RELEVANCE
<i>I.SOCIAL INFRASTRUCTURE and SERVICES</i>	
I.1 Education, Total	
I.1.a) Education, Level Unspecified	0
I.1.b) Basic Education	0
I.1.c) Secondary Education	0
I.1.d) Post-Secondary Education	0
I.2 Health, Total	
I.2.a) Health, General	0
I.2.b) Basic Health	0
I.3 Population Programmes	0
I.4 Water Supply and Sanitation	X
I.5 Government and Civil Society	0
I.6 Other Social Infrastructure and Services	
I.6.a) Employment	0
I.6.b) Housing	0
I.6.c) Other Social Services	0
<i>II.ECONOMIC INFRASTRUCTURE</i>	
II.1 Transport and Storage	X
II.2 Communications	0
II.3 Energy	X
II.4 Banking and Financial Services	0
II.5 Business and Other Services	0
<i>III.PRODUCTION SECTORS</i>	
III.1 Agriculture - Forestry - Fishing, Total	
III.1.a) Agriculture	X
III.1.b) Forestry	X
III.1.c) Fishing	X
III.2 Industry - Mining - Construction, Total	
III.2.a) Industry	X
III.2.b) Mining	X
III.2.c) Construction	X
III.3 Trade and Tourism	
III.3.a) Trade	0
III.3.b) Tourism	0
<i>IV. MULTISECTOR</i>	
IV.1 General Environment Protection	X
IV.2 Women In Development	0
IV.3 Other Multisector	N.A.
V.TOTAL SECTOR ALLOCABLE (I+II+III+IV)	
<i>VI. COMMODITY AID / GENERAL PROG. ASS.</i>	
VI.1 Structural Adjustment (with IBRD/IMF)	N.A.
VI.2 Food Aid excluding Relief Food Aid	N.A.
VI.3 Other General Programme and Commodity Ass.	N.A.
VII. ACTION RELATING TO DEBT	N.A.
<i>VIII. EMERGENCY ASSISTANCE</i>	
VIII.1 Relief Food Aid	N.A.
VIII.2 Non-Food Emergency and Distress Relief	N.A.
IX. ADMINISTRATIVE COSTS OF DONORS	N.A.
X. SUPPORT TO NGO'S	N.A.
XI. UNALLOCATED/UNSPECIFIED	N.A.

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