

Foreign Direct Investment and the Environment



CENTRE FOR CO-OPERATION WITH NON-MEMBERS

OECD

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*Foreign Direct Investment
and the Environment*

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FOREWORD

Foreign direct investment (FDI) is one of the driving forces binding countries into closer economic interdependence. FDI flows have grown rapidly in recent years, associated with the deeper liberalisation of national and international investment regimes.

The rapid growth in FDI has generated debate about its associated impacts, including on the environment. One view is that competition for FDI encourages countries to lower their environmental standards, or at least to not raise them, leading to a “race to the bottom” and the emergence of pollution “havens”. A counter view is that FDI creates pollution “halos”, that is, it supports the establishment of higher environmental standards through the wider adoption of more resource efficient, cleaner technologies; it improves both economic and environmental performance through the implementation of more efficient operational and management practices within multinational firms and their suppliers; and it helps generate pressure from consumers for goods and services produced in an environmentally responsible manner.

In co-operation with the government of the Netherlands, the OECD organised a “Conference on FDI and the Environment” in the Hague in January 1999. A major objective was to examine the empirical evidence and to deepen understanding of the key issues in the FDI and environment relationship among stakeholders in OECD and non-OECD countries. The conference achieved this objective. The papers presented and the discussion during the meeting helped move the debate beyond polemics and to focus more on the environmental performance of investors. There was recognition of the need to address environmental impacts both at the project level and in aggregate. Participants also identified issues which merit further analysis and which will guide future work within OECD in this area. The conference was jointly organised by the OECD’s Environment Directorate and Directorate for Financial, Fiscal and Enterprise Affairs. It was held within the framework of the OECD’s Emerging Market Economies Forum, a programme of the Centre for Co-operation with Non-Members that brings together in their personal capacity officials, business persons, academics, NGOs and others from OECD countries and a range of non-OECD economies engaged in market reform to examine critically policy issues of mutual interest.

This volume presents the papers from the conference. The views expressed are those of the individual authors and do not necessarily reflect the views of the OECD or its Member countries. Mr. Chris Chung of the OECD Environment Directorate edited the volume. It is published on the authority of the Secretary-General of the OECD.

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**OPENING ADDRESS BY MR. GERRIT YBEMA, MINISTER FOR FOREIGN TRADE,
THE NETHERLANDS**

The Hague, 28 January 1999

Ladies and Gentleman, first of all, welcome to the Netherlands, here in The Hague, for this conference on Foreign Direct Investment and the Environment. A special word of welcome to Mr. Donald Johnston, the Secretary-General of the OECD. I am extremely happy that you have found the time to attend this conference.

Today and tomorrow we will be considering a particularly important subject: the relationship between foreign investment and the environment. A particularly important subject because, in our globalising society, it would appear that the environment and the economy are involved in some kind of trench warfare. A trench warfare between two sworn enemies, in which ground gained by one side inevitably means ground lost by the other side. In other words, a kind of "zero-sum game".

But is that conflict inevitable? I think not. It is true that not too long ago such a trench war was indeed fought in the Netherlands. In most cases it was the economy which came out on top. The environment then paid the price. This in turn required tough remedial action to relieve the pressure on the environment. And then the economy, in its turn, was made to pay.

During the formation of the first Cabinet headed by Prime Minister Kok in 1994, the Dutch government took up the challenge to prove that economic growth is not necessarily incompatible with ecological sustainability. That political understanding led to the burial of the hatchet between the policy-makers in my Department and those in the Ministry of the Environment.

Since then, we have achieved growth in many areas coupled with a simultaneous reduction in environmental impact. I should stress here that this was not all achieved through a top-down policy. An important role has been set aside for so-called covenants between industry and government, either central, regional or local. In other words, it is a consensus-based effort.

Let me mention a few figures. In the period 1990-1996, our national income increased by 14%. At the same time, emissions fell by 22%. Atmospheric emissions of lead went down by half, as did emissions of heavy metals. The manufacture of CFCs was stopped altogether, and our total waste flow was halved as a result of increasing re-use and waste incineration.

We have not, unfortunately, been successful on all fronts. For instance, we have not managed to achieve the target reductions for CO₂ that we set ourselves. Dutch emissions of CO₂ have risen by 7%. That shows the difficulty of realising the goal of sustainable development across the board. But, taken as a whole, we have proved that economic dynamics need not by definition be at the expense of the environment. And that principle, I think, should also serve as the starting point for the discussions during this two-day conference.

Foreign investors make an essential contribution to economic dynamics. That applies to the Netherlands, to the countries of the OECD, but perhaps most of all to developing countries. There in particular, by making use of advanced production technologies foreign firms can achieve environmental gains. But do those firms always practise that principle? The role of foreign investors in developing countries has been the subject of much debate recently. Major multinationals stand accused of harming the

environment with impunity in certain developing countries. Environmentally harmful activities are allegedly relocating to countries that enforce low environmental standards -- either deliberately or otherwise.

The Netherlands is home to a number of Europe's largest multinationals. Of late, those companies have been directly confronted with their social responsibility, not only as regards their activities within the Netherlands, but above all in other countries. The theme is that globalisation entails opportunities, but also responsibilities. I fully agree with this view. However, the debate is not always conducted as rationally as it could be. There are those who fail to get any further than putting forward prejudices and emotional statements instead of presenting facts and balanced arguments.

For today and tomorrow, I suggest we investigate the facts in order to find out what is really at stake. What better opportunity to do so than at this conference? After all, rarely is so large a group of environmental experts, entrepreneurs, policy-making officials and academics assembled together at the same time and place. The programme is structured such that the conference theme 'foreign direct investment and the environment' is addressed from all relevant angles.

Of course, I appreciate that it will be impossible to come up with all of the answers in just two days' time. My main hope is therefore that this conference will enlarge our understanding of the environmental consequences of the ever-growing flow of cross-border business investment. And perhaps even more importantly, I hope that understanding will help us to find some guideline to enable the economy and the environment to co-exist peacefully. For that is a vital lesson we have learned in the Netherlands. Economic growth is and will remain necessary to provide for our needs. Competitiveness has to be maintained, for there must be enough jobs to go round. Enough money must be earned to pay for the increasing costs of healthcare and education, and to be able to go on investing in the development of better and cleaner products. And the simple fact is that all this is impossible in a shrinking economy.

Economic growth is something we cannot do without. But it must be sustainable growth, because we have to meet our present needs without leaving the account for future generations to settle. I believe this conference can be instrumental in identifying what contribution foreign direct investment can make to achieving the goal of sustainable development worldwide. I am proud to be host to this important gathering of experts, and I look forward to hearing about the results. Thank you very much.

FOREIGN DIRECT INVESTMENT AND THE ENVIRONMENT: CHALLENGES AND OPPORTUNITIES

**Address by Mr. Donald Johnston
Secretary-General of the OECD
The Hague, 28 January 1999**

Good morning, Mr. Minister, ladies and gentlemen. I am honoured and delighted to address this conference on foreign direct investment and the environment, a subject of high priority for the OECD. I am especially pleased that this conference is part of the OECD Emerging Market Economies Forum, so that we will have the opportunity to hear the views of a number of countries from outside the OECD who are important players in the fields of investment and environmental protection. I am also gratified that our discussions will be enriched by the perspectives of the business community and groups that are dedicated to preserving the health and beauty of our planet. Finally, I would like to express OECD's gratitude to the Netherlands Government for hosting this event.

Foreign Direct Investment is a Powerful Force in the Global Economy

Foreign direct investment -- the acts of private businesses investing capital in a foreign country in order to produce goods or services -- has contributed to a dense tissue of cross-country economic relations that, as shorthand, we call "global economic interdependence." Flows of foreign investment have increased dramatically in recent years. Between 1985 and 1997, they grew from around US\$60 billion to US\$400 billion -- substantially faster than growth of international trade. In addition, during the 1990s major new investors emerged. Non-OECD countries accounted for 7 per cent of world investment outflows in 1991. In 1997, their share had more than doubled, to 15 per cent. It is no surprise that this expansion followed on the heels of an almost world-wide effort to liberalise policies on investment.

The FDI-Environment Relationship: Moving beyond Polemics

Debates on the environmental and other consequences of investment have sometimes been highly polarised. Some commentators are worried that countries will lower their environmental standards in order to attract foreign investment, thereby creating so-called "pollution havens." Others argue, to the contrary, that foreign investment could promote pollution "halos" by introducing modern, more efficient and less polluting technologies.

This conference will move beyond polemics and analyse carefully the relationship between foreign investment and the environment and the way to ensure that policies concerning both are directed towards achieving each country's economic and social objectives.

Integrating Investment and Environment Objectives and Policies

The benefits of foreign direct investment and the reasons why many governments try to attract it are well known. Foreign direct investment creates jobs and raises economic growth. In many cases it will

stimulate technological innovation, increase competitiveness, improve efficiency and transfer intangible resources such as organisational, managerial and marketing skills.

As the papers prepared for this conference show, foreign direct investment can also support the broader goal of sustainable development. However, whether this happens depends on a country's framework of both environmental and investment policies, and on its vision of economic and environmental development.

Stated in the simplest form, policies must set high environmental standards. They must also be clear and stable so the investor, risking capital in a foreign environment, has a sure sense of what is expected over the medium to long term. If attention is not given to both sets of objectives, countries will lose valuable investment or confront environmental damage generated by those investments. And such damage might even undermine the longer-term prospects of the investments themselves.

Furthermore, while it is desirable and possible to integrate investment and environmental objectives at the project level, policies must also take account of the cumulative impact of foreign as well as domestic investments. The increased scale of economic activity might create unacceptable results for human health, local communities and natural resources and outweigh the economic and efficiency gains from FDI. A classic example is decisions to build new road infrastructure. The road will attract transport of passengers and goods as well as new industrial sites, and the up-shot will be more economic activity and jobs, but also more congestion, noise and pollution.

Where investment and environmental policies are successfully integrated, this will enhance the prospects for achieving both investment and sustainable development goals.

Achieving well-integrated environmental and investment policies calls for new forms of co-operation, between ministries within governments, among countries and between governments and other stakeholders. Across OECD countries we see many new coalitions and mechanisms forming to address the issues, some of them stimulated by OECD initiatives. New task forces bring together different government departments, environmental advocacy and business groups. This activity is a promising development.

The OECD and its Work on Investment, Environment and Sustainable Development

I hope that each participant will take from this conference something that he or she can use at home. Those of you who are coming to an OECD event for the first time might like some explanation of what OECD brings to this event and what we hope to obtain from it.

The OECD offers a venue and a co-operative tradition in which its Members can examine together the policy issues at the top of government agendas. Working together, government officials identify and assess policy options and encourage each other to take action.

In its committees, the OECD addresses the full range of policy issues -- finance, labour, trade, education, agriculture, investment, environment -- everything, except national defence. Thus, when the issues require, OECD can bring together different policy communities -- agriculture and trade, taxes and employment, investment and environment -- so they can confront their ideas and objectives. Often, at the beginning, sparks fly, since it takes some time for experts in one discipline to understand the concerns, objectives and even vocabulary of another. But the value-added of breaking down traditional

departmental boundaries in order to address multi-faceted issues is immense. This conference is a good example of this cross-disciplinary approach.

OECD Members are using the Organisation as a means to exchange ideas with other countries that are increasingly active in addressing international environmental, economic and social issues. The OECD can also offer governments an opportunity to expand their consultations with representatives of domestic civil society, labour and business, to groups that are active at the international level.

The OECD also provides analytic continuity. I want to stress that this conference is not a "one-off" event. It will contribute to OECD's ongoing search for more effective investment and environmental policies.

In 1997, I received a report from a High-Level Advisory Group on the Environment to the OECD. The Advisory Group strongly recommended that the OECD help its Members lead the way towards global sustainable development by defining approaches to integrate economic and environmental policy objectives. The OECD is taking up this challenge through a major study on sustainable development, to be completed in 2001. It addresses five themes: *(i)* climate change; *(ii)* economic support measures, taxes and resource pricing; *(iii)* technology and sustainable development; *(iv)* natural resource management; *(v)* indicators of sustainable development.

Another important related activity is the review of the OECD Guidelines for Multinational Enterprises. The Guidelines, established in 1976, are a code of good corporate conduct that is supported by our Member governments, business and trade unions. Our Member countries want to update and expand these Guidelines by mid-2000. The Guidelines include a chapter on environment and the revision of that chapter will be a central issue. Work on the Guidelines will also contribute to integrating environmental policy objectives into a multilateral framework for investment rules.

As a last example, in response to a request by OECD Environment Ministers, OECD is developing an environmental outlook to the year 2020 and an associated policy strategy. Examining the environmental implications of trade and investment liberalisation is one element of this work.

The Significance of this Conference

The results of this conference will be taken into account in all these activities. The agenda of the conference focuses on three main issues:

- the empirical evidence about the positive and negative implications of FDI on the environment -- do these effects differ according to the kind of industrial activity of the investor, the stage of development of the country, or its economic structure and natural resource base;
- the role that governments in the host countries for foreign investments could play to integrate investment and environmental policy goals; and how they could be supported by governments in the source countries and by financing institutions;
- the actions that private enterprises could take to ensure that investment meets rigorous environmental standards. Increasingly, business is taking such actions on its own initiative, and in co-operation with government and intergovernmental organisations. The World Business Council for Sustainable Development, a coalition of 123 international companies

drawn from 20 business sectors is providing business leadership and acting as a catalyst for change. Another example is the Business Charter for Sustainable Development developed under the aegis of the International Chamber of Commerce.

I hope that, at the conclusion of this conference, we will have moved the discussion of the relationship between foreign investment and the environment forward in significant ways.

We will have a better shared understanding of the key issues, especially of the way in which the FDI and environment relationship is shaped by circumstances at the international, regional, national and local levels.

We will have identified some of the most important actions that the different stakeholders can take to ensure that environment and investment policies are mutually supportive.

The OECD's objective is to help clarify the key issues and identify practical approaches which governments, investors and communities can take to optimise the economic, environmental and social benefits of investment. I thank you for participating in this effort. I wish you success in your deliberations and I look forward to seeing the results.

SUMMARY OF THE CONFERENCE DISCUSSION

OECD Secretariat

1. Introduction

Recent debates on the environmental implications of foreign direct investment (FDI) have often been highly polarised and polemical. In order to promote a dialogue on the key issues in the FDI-environment relationship, the conference brought together in their personal capacity government officials, business persons, trade union representatives, NGOs and academics from OECD and non-OECD countries. In total, 146 people participated in the meeting: 107 from OECD Member countries; 19 from non-member countries (Argentina, Azerbaijan, Brazil, Chile, China, Estonia, Hong Kong (China), Latvia, Malaysia, the Philippines, South Africa and Thailand); 11 from international organisations (EBRD, European Commission, UNCTAD, UNCSD, UNEP, World Bank). Mr. Gerrit Ybema, Minister for Foreign Trade, the Netherlands and Mr. Donald Johnston, OECD Secretary-General opened the conference. The OECD's Environment Directorate and Directorate for Financial, Fiscal and Enterprise Affairs jointly organised the conference.

The objectives of the conference were two-fold:

- to deepen understanding and analysis of the key issues in the FDI and environment relationship within the context of a globalising economy; and
- to examine ways in which this relationship might be improved to mutually reinforce environmental and FDI policy goals.

Discussions in the two plenary sessions and three parallel workshops focused on:

- empirical evidence on the role of FDI in raising or lowering environmental standards or performance;
- the policy and institutional frameworks needed to manage the environmental effects of FDI, including the role of the environmental impact assessment process; and
- private and public sector initiatives to promote “best environmental practice” in FDI activities, including the role of corporate and industry codes of conduct, environmental reporting, information disclosure and investment standards.

Themes from the discussion in the two plenary sessions and three parallel workshops are summarised below.

2. The Impact of FDI on Environmental Standards - “Pollution Havens” and “Pollution Halos”

(a) Data Problems

There has been vigorous debate about a “race to the bottom” in environmental standards resulting from competition between countries, and also among regions within a country, to attract FDI. The so-called pollution haven hypothesis implies that competitive forces would “push” FDI away from countries with high environmental standards, or “pull” it towards those with low environmental standards. Conversely, the notion of pollution halos suggests that FDI might promote the establishment of higher environmental standards through technology transfer effects or via existing management practices within multinational and other firms. Overall, there does not appear to be evidence corroborating the pollution havens hypothesis. On the other hand, there are some studies, including one tabled in the meeting that are consistent with the pollution haven hypothesis.

Several site-specific examples of pollution havens and halos were cited, suggesting that FDI-related environmental problems may indeed exist in certain industries, sectors, or countries. Since statistical studies tend to draw conclusions at an aggregate level, doubts were expressed about these particular methodologies. A case study approach to future analysis was therefore suggested as a way of gaining more practical insights into the environmental impacts of FDI in specific contexts.

Moreover, since existing empirical data and studies are not conclusive with regard to the (relatively narrow) question of pollution havens/halos, they are even less likely to be conclusive with regard to the broader issues involved in the FDI-environment relationship (see next section). A significant data gap therefore exists, and several participants called for work to define and to test possible methodologies that might help meet this need.

Several suggestions were offered on how to make more creative use of existing data, such as the development of indices which link investment and environment information in the same parameter (e.g. an “index of comparative environmental advantage for FDI”).

(b) Need for a Broader Perspective

There was consensus that a broader perspective is needed beyond just focusing on the issue of pollution havens and halos. More detailed studies are needed to examine the environmental impacts of FDI in different sectors and countries. For example, the environmental impacts of FDI will probably differ depending on whether that FDI is headed toward manufacturing industries, service industries or resource-using industries. These impacts, and the significance of the costs of addressing them, will also vary according to whether the FDI involves large multinationals, or smaller (and perhaps, domestic-only) firms. There is also the problem of “cascading pollution havens” (i.e. where firms contract out their “dirty” production processes to other companies in order to appear “green” themselves).

Some participants considered that competition for FDI among regions within a country would ultimately prove to be a more important issue for the environment than competition between countries. A more basic question is whether foreign ownership is likely to lead to different environmental results than

would domestic ownership. If this is unlikely to be the case a focus on foreign investment, rather than investment in general, will not be particularly useful in resolving environmental issues.

While the *relocation* of economic activity has usually been the main reason for political interest in FDI, it is the *performance* of investing firms once they are established that matters more for the environment in the long run. Thus, some refocusing of attention away from relocation, and towards performance, was recommended. Another micro issue that has been underrepresented in the debates so far is that of the impacts of FDI on individual incomes and consumer behaviour.

In terms of the *macro* environmental issues, the focus of the debate should be extended beyond “pollution” to the broader issue of “resource management”. There is also a need to examine the cumulative environmental effects of investments rather than to focus just on individual projects. This approach recognises that although an investment might be judged as “environmentally-friendly” at the plant level, its operations may contribute to a larger scale of economic activity at the macro level, which may in turn lead to additional environmental harms.

There were also proposals for broadening the analysis of the FDI and environment issue to include social factors (employment, indigenous rights, labour practices, income distribution, etc.). The addition of these social factors was regarded as essential to place the FDI and environment debate more squarely in a sustainable development context.

Several themes emerged as high priorities for further analysis. On the FDI side, these included: (i) better understanding of FDI-environment links in the resource-using sectors; (ii) analysis of whether or not foreign or domestic ownership really matters in determining the environmental impacts of investment, including the use of cleaner and more resource-efficient technologies; and (iii) issues related to regional competition for FDI. On the environment side, these included: (i) the local and international environmental implications of the increased scale of economic activity associated with FDI; (ii) arrangements for domestic governance; and (iii) better understanding of investor environmental performance.

3. Policy and Institutional Responses in Managing the FDI-Environment Relationship

(a) Level of Policy Response

The appropriate level of policy response to manage the FDI-environment relationship was discussed in the context of domestic and international responses.

Since FDI’s impact on the environment is largely local, it is crucial that appropriate domestic policies and associated regulatory frameworks be developed to deal with these impacts. This should involve not only policies directly related to the environment or to investment (e.g. technology transfer, capacity-building, environmental impact assessment procedures), but also other, indirectly related policies (e.g. land use policies, tax policies, financial incentives, government procurement procedures). The robustness of environmental policies and institutions, including the adequacy of supporting regulatory instruments, are important determinants of the environmental impacts of (foreign) investments at the project and aggregate levels.

Opinions were divided concerning the appropriate response(s) at the international level. Setting all environmental standards at the same level would inevitably result in inefficient environmental policies

that do not take into account different local environmental circumstances. On this view, international solutions would not necessarily (or by themselves) contribute to an improved environment.

On the other hand, some form of international response may be needed to deal with either transboundary environmental issues or the international competitiveness effects of domestic environmental policies. In this context, some participants suggested that there is scope for various forms of international response. For example, an internationally agreed “minimum baseline” of environmental performance could be useful. It was noted that such a “baseline” already exists in other areas of government policy (e.g. ILO core labour standards).

In practice, domestic and international levels of response are not mutually exclusive. There are already some multilateral environmental agreements, which have implications for investments, and vice versa. Opportunities exist to build on these existing frameworks for the mutual benefit of both FDI and the environment.

The optimal approach may be a dual one: (i) implement appropriate domestic measures where it is possible to do so unilaterally; and (ii) where unilateral measures are not possible, develop international rules to help reduce “free rider” competitiveness problems; such rules should not be used, however, where the risk of free-riding is minimal.

(b) *Institutional Responses*

The pace and scale of FDI are challenging the capacity of some host countries to absorb new investment and to manage its environmental implications. In this context, different stakeholders can play important roles in strengthening the integration of investment and environmental policy objectives. To provide a framework, several general principles were identified:

- access to information on investment proposals;
- public participation in all stages of the investment and environmental assessment process;
- strengthening legal systems and ensuring access to courts to settle disputes;
- transparency, accountability and predictability in the design and implementation of investment and environmental policies and regulations;
- establishment and enforcement of appropriate environmental standards; and
- no derogations from statutory environmental requirements to attract investment.

Host country governments should integrate environmental considerations into their macro-economic policies and national sustainable development strategies. Institutionally, this might be supported by formal and informal mechanisms for co-ordination in policy development. At the same time, attention needs to be given to the enforcement of environmental laws and standards (i.e. no exemptions granted), the elimination of environmentally-damaging economic support measures, wider use of economic instruments such as taxes and charges, and clear rules governing investor liability for cleaning up past environmental damage.

Strategic planning also has an important role to play in promoting the development of integrated policies and programmes. These include, *inter alia*, national development strategies, regional economic development plans and strategic environmental assessment(s). At the individual project level, the environmental impact assessment process (EIA) provides a site-specific evaluation of the expected impacts and measures to reduce them. Local capacity building is also critical. This includes the strengthening of investment analysis expertise in environmental ministries and vice versa, as well as developing the local consulting sector and reinforcing NGO capacity.

Promoting environmentally-friendly FDI was also considered a major task for *source country stakeholders*. This could be supported by several measures. First, source country governments should set appropriate environmental standards to guide investor actions in both their domestic and overseas operations. Second, the environmental procedures and practices of government agencies that provide investment assistance, such as export credit agencies, should be strengthened to address more effectively the environmental implications of their activities. Third, technology co-operation within the private sector should focus on cleaner and more resource-efficient technologies. Fourth, supply chains could be “greened” by investors providing training to their foreign suppliers that help them improve their environmental performance.

Civil society has an important role to play as a “whistle-blower”, ensuring that the process of FDI is not only transparent but also takes account of the distribution of costs and benefits to society in general and to affected local communities more specifically. There is also a need for a more constructive engagement among governments, the private sector and civil society in policy and project design, implementation and evaluation.

Finally, it was suggested that the role of *international organisations* might focus on several areas. First, international financial institutions (IFIs) could provide resources to help developing, transition and emerging market economies undertake strategic planning to integrate investment, environmental and social policies. Second, these institutions should give greater attention to evaluating the *aggregate* environmental impacts of their investment activities, and not focus exclusively on the environmental impacts of individual projects. In this context, IFIs should implement their EIA and strategic environmental assessment procedures in an open and participatory manner. Third, greater efforts need to be made to mainstream environmental considerations into existing and any new multilateral trade and investment arrangements, as well as bilateral agreements and codes of conduct. Fourth, monitoring, analysis and dissemination of “best practices” on the integration of investment and environmental policies are tasks that international organisations are well placed to facilitate.

4. The Role of Voluntary Commitments

Voluntary commitments can play an important role in host countries as a supplement to existing environmental policies. A major challenge is to use voluntary commitments as part of a strategy to ensure that enterprises, both domestic and foreign, not only comply with national environmental standards but also have incentives to go beyond them.

(a) What Standards Should Apply?

A key issue concerns the role of voluntary commitments and legally binding standards. On the one hand, legally binding standards usually include sanctions for non-compliance. This can help reduce the “free rider” problem associated with voluntary commitments. Some participants also considered that a

voluntary approach is sometimes proposed by enterprises to avoid the imposition of binding standards. On the other hand, legally-binding standards within a voluntary commitments context require many years to be agreed upon and, being the result of a negotiation process, are not likely to generate very high standards of environmental performance.

Voluntary commitments need to be considered within the broader perspective of the regulatory frameworks established by governments. Such commitments should aim to go beyond the minimum required by regulations. To promote transparency and credibility, there was strong support for making the reporting of compliance with voluntary commitments binding on the enterprise and to include provision for independent verification.

Universal codes of corporate conduct such as the OECD's Guidelines for Multinational Enterprises were considered an important supplement to more detailed environmental codes of conduct of individual enterprises. In particular, such standards can serve as an independent benchmark of the state-of-the-art, thereby helping to harmonise objectives among government, business, labour and other stakeholders, as well as providing a means to address the free rider problem.

Defining "best practices" for enterprise environmental conduct is a major challenge. Although business and NGOs have developed a number of criteria, often independently of each other, there appears to be some convergence. For example, that voluntary standards should go beyond the legal minimum, that independent verification of reported performance is necessary, that stakeholders should be engaged in establishing standards and in verifying compliance, that widely recognised standards should serve as benchmarks, and that financial, social and environmental considerations should be integrated.

(b) *Promoting the Implementation of Best Practices*

Once "best practices" have been defined, their implementation needs to be promoted. At the government level, an appropriate enabling policy framework and supporting instruments need to be established. This could include annual awards, greater publicity, access to investment guarantees and reduced premiums for export credit insurance and other incentives. A direct incentive at the firm level is the creation of a corporate culture in which good environmental conduct is associated with enhanced financial performance. Outside pressures, particularly from competitors, shareholders, consumers and civil society, also act as strong levers. The financial services sector also has an important role to play here.

Encouraging the adoption of best practices in small and medium-sized enterprises is another important challenge. Often, these enterprises do not have the resources in terms of time, finance and personnel to dedicate to environmental concerns. Timely dissemination of information and in-plant assistance to these enterprises on best environmental practices would often be cost-effective. Reducing the costs of achieving an appropriate level of environmental reporting would also be a positive step. This might include the development and wide dissemination of a standard reporting model, available in a low-cost software package.

The "free rider" problem might be addressed through non-binding codes of conduct, such as the OECD Guidelines for Multi-national Enterprises. In particular, encouraging subcontractors and suppliers (who are often smaller enterprises) to comply with the Guidelines could promote wider compliance. This might be feasible in the case of contractors, but more difficult in the case of suppliers. Those codes should not only focus on unsatisfactory practices; efforts should also be made to highlight good examples and role models in the private sector.

(c) **Ensuring Credibility**

Corporate environmental reporting often suffers from a lack of credibility in the public's view, even in cases where this is not fully justified. Reporting that emphasises "trust me" is no longer accepted by the public; "show me" is now required.

One way to improve credibility would be through greater use of benchmark targets and standardised reporting against these benchmarks. Concern was expressed, however, about the feasibility and practical value of such an approach.

External verification of reported environmental performance is one means of promoting credibility among stakeholders. Such verification is done against recognised and independently-set standards. Guidelines for reporting have been developed by, *inter alia*, UNEP and the Coalition for Environmentally Responsible Economies (CERES) and an attempt is currently being made at a global reporting initiative. It was recognised, however, that verification is neither a panacea for ensuring credibility nor a substitute for engaging stakeholders in dialogue.

5. Conclusions

There is a need to use a much broader and more integrated analytical framework -- one which considers both micro and macro perspectives of the FDI-environment relationship. All stakeholders represented in the conference have a contribution to make to this broader perspective.

It is useful to distinguish between *FDI host countries and FDI source countries*. Concerning the former, there is a need to strengthen the analytical, policy and institutional capacities with respect to both FDI and the environment. Source countries could assist by sharing best practice experiences in developing and implementing policy, including the role of policy tools such as economic instruments, voluntary agreements, strategic environmental assessment and EIA. They could generally serve as a role model, demonstrating that high environmental and investment standards can be made mutually-supporting.

The *private sector* has a responsibility to not only comply with legislative and other statutory requirements, but also to meet a wider responsibility to both society in general and local communities in particular for the environmental performance of their operations. The issue of whether and how "best practices" might be used as standards requires further reflection. Best practices should, however, be incorporated into corporate codes of conduct and universal codes, such as the OECD Guidelines for Multinational Enterprises. In this context, the private sector has a key role to play in defining with its constituents what best practices are in different industries and sectors, as well as their means of implementation and enforcement.

International organisations should develop programmes within their core expertise and ensure that information on these programmes is exchanged to assure synergies and to avoid duplication of effort. They could also act as "honest brokers" by bringing together stakeholders to analyse and discuss specific issues outside a negotiating framework.

NGOs should continue to play their role as "whistleblowers" on the policies and actions of governments, international organisations and the business sector. They also have an important role to play as a responsible partner in dialogue consultations: with governments (concerning policies) and with business (as far as individual projects are concerned).

There was consensus that the *conference had generated a momentum* that should be built upon. In particular, there was wide support for a follow-up event to be organised at an appropriate time in the future in order to review progress made by the different stakeholders and to engage them more deeply.

Several *priority areas for future work* were identified:

- Analysis of the pollution havens and halos issue should extend beyond its present focus on industry *relocation*. More emphasis should be given to monitoring the environmental *performance* of investors, including the cumulative, scale effects of investment. Case studies of the environmental implications of FDI in different sectors, regions and countries of different economic structures would be particularly useful.
- Sectoral differences need to be better taken into account. The resource-using sector merits priority attention, given its potential to generate important environmental and social impacts on affected communities. Consideration should also be given to further promoting public-private sector partnerships (e.g. in the urban water sector), to provide positive environmental benefits.
- Improved policy and institutional frameworks for integrating investment and environmental policy goals require further analysis. This includes opportunities for, and barriers to, strengthening co-operation within government, and between government and other interested parties.
- Voluntary environmental commitments by enterprises can play a useful role in many countries. Such commitments are more likely to be effective if they contain benchmarking criteria and provide for independent verification of environmental performance. The OECD Guidelines for Multinational Enterprises, presently under review, could contribute to these efforts by incorporating “best practices” in the areas covered.
- Further analysis of the role of environmental standards in investment activities would be timely. This could build upon work carried out by some international financing institutions and extend the analysis to include both OECD and non-OECD countries.

FOREIGN DIRECT INVESTMENT AND THE ENVIRONMENT: BOON OR BANE?

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1. Overview

“Foreign direct investment (“FDI”)¹ and the environment” -- a phrase that has traditionally evoked one of two, opposite reactions:

- FDI is a *bane* of environmental protection given its direct use of land and other natural resources, as well as the increased consumption it encourages; or
- FDI is a *boon* for environmental protection given the new resources it brings for improving efficiency, transferring knowledge and addressing existing pollution.

The resulting conflicts have fed the search for evidence to support each view: multinational enterprises (“MNEs”) relocating resource intensive operations to countries with less stringent requirements versus foreign investors cleaning up existing production facilities.

FDI is neither a boon nor a bane for the environment; it is both. Because of the huge differences among the locations, sectors and investors involved in FDI, examples can be found to support both positions.

The fact that FDI is both a boon and a bane is not a problem. Rather, it creates a tremendous opportunity to use FDI as a vehicle for bringing more private investment to the goal of sustainable development. FDI promotes basic economic goals: stability, growth, knowledge transfer. It has the demonstrated potential to promote basic environmental goals: increased awareness of environmental factors, increased efficiency of resource use, new resources to address existing environmental problems. It is the largest investment category most directly affected by environmental considerations. Success with FDI can also be used to pull other types of private investment onto a more sustainable path. While integrating these financial and environmental goals will not complete our journey to sustainable development -- important social issues remain to be addressed -- they are critical parts of progress in that direction.

FDI’s potential will only be realised, however, if both sides of the traditional debate -- “baners” and “booners” -- are actively involved. For baners, the primary focus should not be on proving that FDI is bad for the environment but on meeting the need for predictable, transparent and

¹ The OECD defines FDI as “capital invested for the purpose of acquiring a lasting interest in an enterprise and of exerting a degree of influence on that enterprise’s operations” (OECD, 1998a).

effective regulatory frameworks in both the investment and environmental arenas. For booners, the primary focus should not be on proving that FDI is good for the environment, but on expanding the collaborations among traditionally warring parties to create new opportunities for environmental investments.

Only by working from both perspectives will the risks of either extreme be avoided and the potential benefits optimised. All of the parties traditionally interested in FDI and the environment -- host country governments, source country governments, multilateral organisations, multinational companies, environmental NGOs, financial institutions and individual consumers -- have key roles to play in this effort.

This paper offers some thoughts for discussion on ways to capture the opportunity presented by FDI. It builds on the excellent work done by the OECD over the past several years on FDI and the environment, as well as the papers presented in this volume. The paper has four parts:

- an update on trends in FDI and its links with the environment;
- a framework for using FDI as a vehicle for applying more private investment to the goal of sustainable development;
- suggested areas of work for key actors; and
- issues requiring further consideration.

2. Update on Trends in FDI and its Links with the Environment

The OECD has prepared comprehensive summaries of recent trends in both FDI (OECD 1998a) and its links to the environment (OECD, 1997). The purposes of this section are to provide some additional data and to highlight important characteristics of the FDI and environment relationship.

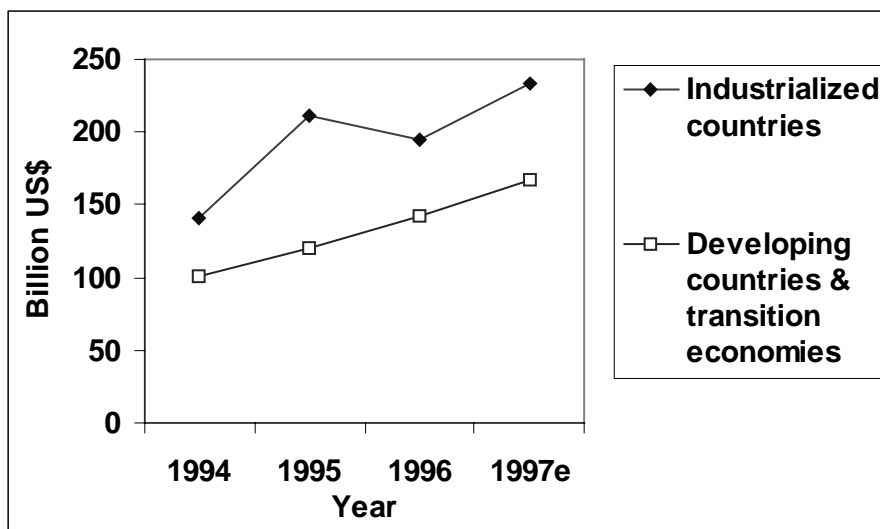
(a) Trends in FDI

Amounts: Global FDI continues to expand. According to the United Nations, 1997 was the seventh consecutive year of record FDI inflows, rising 19% to US\$400 billion (UNCTAD, 1998).

Growth in global FDI appears to have continued in 1998, spurred by a 50% increase in the already record levels of mergers and acquisitions. According to Securities Data Company, the value of cross-border mergers and acquisitions increased from approximately US\$ 400 billion in 1997 to approximately US\$ 600 billion in 1998 (The Economist, 1999). The total value of mergers and acquisitions world-wide in 1998 topped US\$ 2.4 trillion.

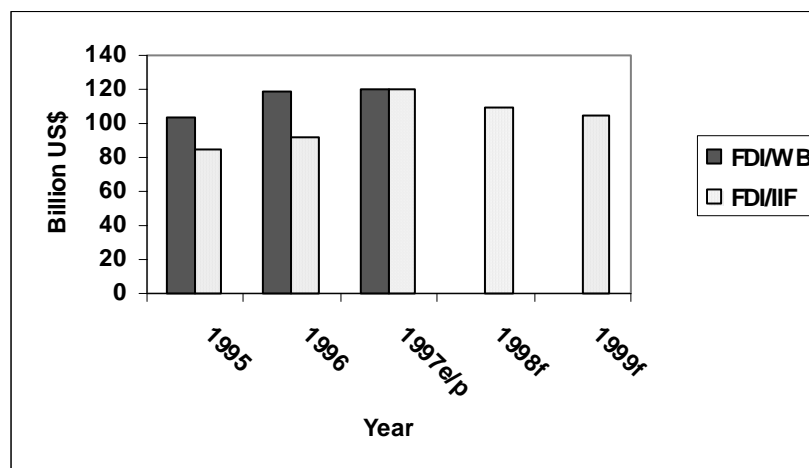
Locations: Most FDI continues to go to industrialised countries (Figure 1), while the overall rates of growth in flows to developing countries appear to be slowing (Figure 2).

Figure 1: Total FDI Inflows 1994 - 1997



Source: UNCTAD, 1998.

Figure 2: Net Flows of FDI to Developing Countries 1995 - 1999



Sources: World Bank (WB), 1998; Institute of International Finance (IIF), 1998.

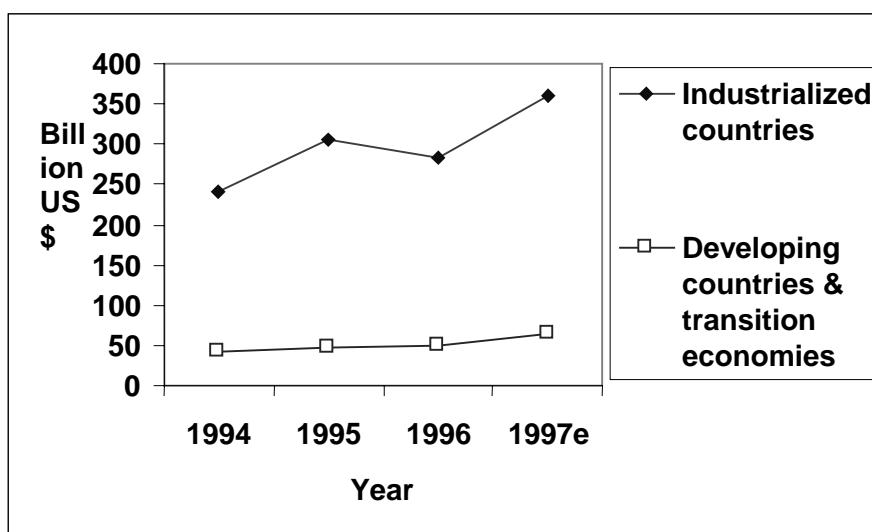
Notes: World Bank data for 1997 are preliminary. IIF data for 1997 are an estimate (e), while those for 1998 and 1999 are a forecast (f).

The actual rates of change in FDI flows vary from country to country, however. For example, 1998 was a record year for FDI in Thailand (Nation, 1999), while Indonesia is likely to face continuing reductions in FDI (Jakarta Post, 1998). China had to revise upward its estimates for 1998 -- to record levels (Lu, 1998).

FDI flows also remain geographically concentrated. The top 10 developing country recipients of FDI received 72% of the flows in 1997, down only slightly from 76% in 1994 (World Bank, 1998a). For 1999, one survey of corporate executives (A.T. Kearney, 1998) found that the most likely destinations for FDI are the United States, Brazil, China, the United Kingdom, Germany and Poland, closely followed by Mexico, France and Spain.

Sources: Most FDI continues to come from industrialised countries.

Figure 3: Total FDI Outflows 1994 - 1997

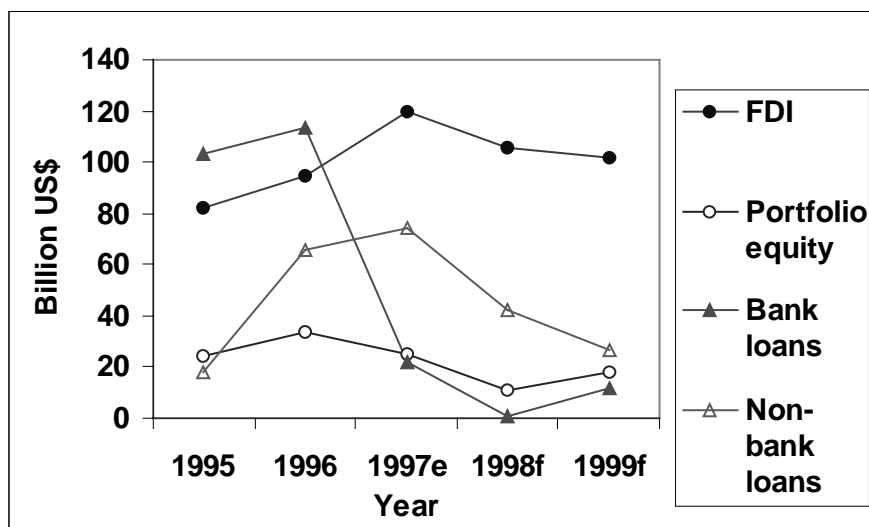


Source: UNCTAD, 1998.

At the same time, the number of foreign direct investors based in developing countries continues to grow. A significant number of these investors are small and medium-sized companies. Their presence challenges traditional theories that only large companies can engage in FDI and only when they have a competitive advantage to exploit. In fact, some commentators now suggest that FDI can help a company overcome competitive disadvantages through access to external resources (Chen and Chen, 1998).

Relative stability: Even during the financial crises of 1997-1998, FDI remained the most stable form of international private investment in developing countries.

Figure 4: Net Private Flows to Developing Countries 1995 – 1999



Source: Institute of International Finance, 1998.

Notes: Data for 1997 are an estimate (e), while those for 1998 and 1999 are a forecast (f).

According to UNCTAD (1998), the major reasons for this relative stability are FDI's:

- longer-term profit horizons;
- longer-term assessment of market potential;
- lower susceptibility to “herd” behaviour because of the different investment motivations at work; and
- difficulty of being pulled out of the country once invested.

Choice of destination: MNEs choose the location for their FDI based on a number of different factors. According to a recent survey of top executives (A.T. Kearney, 1998), the most important considerations are:

- market size;
- political stability;
- GDP growth;
- regulatory environment; and
- profit repatriation regime.

The importance of political stability and the regulatory environment increased during 1998, presumably in response to the financial crises in Asia and Russia.

UNCTAD (1998) considers a mix of country and firm specific factors when analysing how MNEs choose the location for their FDI. At the firm level, they include the motive for the investment (market, resource or efficiency seeking), whether the investment is new or sequential, the size of the company and its business sector. At the host country level, the policy framework for FDI is the critical factor, including stability, rules for business operations, protections for foreign investors, as well as tax and trade policies.

Two important points arise from these analyses:

- first, host country policy frameworks matter; and
- second, environmental factors are rarely mentioned as locational determinants.

Taken together these conclusions help lay the basis for integrating investment and environmental considerations in a country's development plan, as described below.

(b) *FDI's Links with the Environment*

While FDI continues to grow, so too does our understanding of its different links to environmental factors. Without repeating the more complete treatments provided elsewhere (OECD 1997; Zarsky, 1998; Gentry, 1998a), this section highlights two aspects of the FDI and environment relationship.

Varying environmental impacts: Since FDI is not monolithic, neither is its impact on environmental performance.

Fortunately, our collective understanding of how the FDI and environment link can vary across locations, sectors and investors continues to expand. Some of the major distinctions include the following:

- *Locations:* (a) does the host country have a strong environmental regulatory framework in place (foreign direct investors in the US have contributed significant amounts to cleaning up contaminated sites owned by the companies they acquired); (b) is the investment in a new or an existing operation (improving the economic efficiency of existing operations can also reduce environmental loadings); or (c) is the investment in an urban or a rural setting (affecting the likelihood that sensitive sites are implicated);
- *Sectors:* (a) is it an environmental investment (such as in improving water systems); (b) is it in services, such as banking or telecommunications (with their less direct environmental implications); or (c) if it is in manufacturing or resource extraction, is it to establish a base for exports (potentially exposing the company to greater environmental pressures from customers); and
- *Investor:* what level of environmental pressure does the investor already face locally, globally and in its home country (affecting its willingness to consider and address environmental issues as part of its investment).

Such differences are important to both the design of integrated investment and environmental frameworks, as well as to the identification of areas of potential collaboration, as described below.

Shared roots of environmental and financial crises: Efforts to integrate investment and environmental policies are helped by the growing realisation that the environmental and financial crises in developing countries have shared roots and responses (Georgieva, 1998).

Predictable, transparent and effective regulatory structures are the common elements. In the environmental arena, if environmental requirements (broadly defined) do not lead firms to internalise

the otherwise externalised environmental costs of their activities, there are few incentives not to pollute air, water and land. In the financial arena, if basic investor protections are not in place, along with other provisions addressing the special needs of foreign investors, private investment will not come.

The Asian financial crisis has led the private financial community to advocate regulatory reforms in host countries that resonate well with environmental advocates. For example, in his September 1998 letter to the World Bank and the International Monetary Fund, the Managing Director of the Institute of International Finance (IIF) called for:

- “A soundly managed, well-regulated financial system”;
- “A legal framework that promotes fairness and reduces uncertainty”; and
- “Increased transparency.” (Dallara, 1998)

If similar steps were taken by host country governments to implement effective environmental regulatory frameworks, particularly those integrated with investment programs, tremendous progress could be made on many pressing environmental issues.

3. FDI as a Vehicle for Applying More Private Investment to the Goal of Sustainable Development

The most useful response to this growing body of information is to view FDI as the “thin end of the wedge” for capturing these integration opportunities in the move toward sustainable development. From a development perspective, FDI is viewed as the most desirable form of international private investment. From an environmental perspective, it has the most direct links to environmental factors. FDI also carries with it the potential to affect other investment flows, helping to pull them into a more integrated approach as well.

This section offers some points for discussion on ways FDI might be used to further this integration. Two words of caution are necessary, however. First, this paper only addresses the economic and environmental aspects of sustainable development as applied to FDI. Given the social and equity implications associated with MNE operations -- both good and bad -- considerable amounts of work still need to be done to include this third element of the sustainable development concept. Second, FDI alone is not sufficient to bring us to a sustainable future. Other forms of private capital -- from domestic savings to portfolio equities -- must also be engaged, alongside public funds. For the reasons below, FDI provides a ready starting point for our efforts at integration.

(a) More Private Investment is Needed for Sustainable Development

Agenda 21, adopted at the 1992 Earth Summit, estimated that US\$ 600 billion is needed each year between 1993 and 2000 to put developing countries on a path to sustainable development (UNCED, 1992). Since then, estimates of the new investment needed by developing countries have continued to rise.

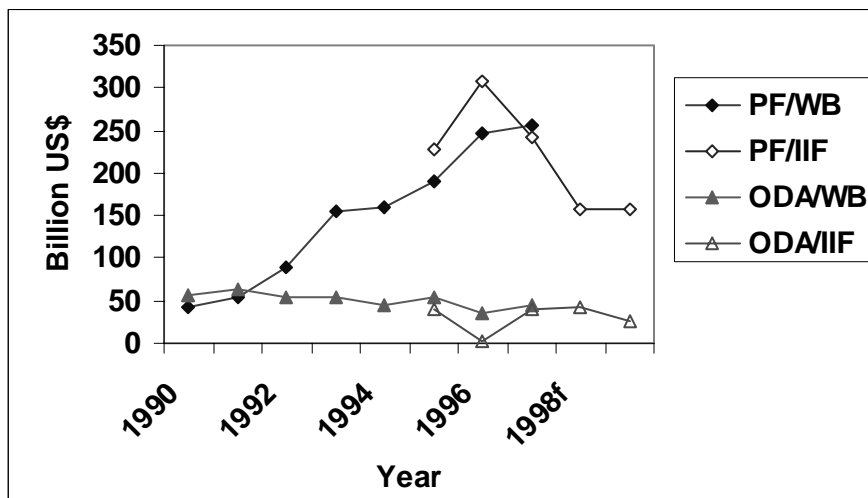
Most of the funding for meeting these needs in any particular country will have to come from its own public and private resources. Unfortunately, in many developing countries, domestic resources are insufficient to meet even basic needs. As a result, the poorest countries have had to rely on transfers

of foreign capital to meet a portion of these goals. Agenda 21 anticipated that, of the US\$ 600 billion required each year, approximately US\$125 billion would come from foreign sources (UNCED, 1992).

The expectation was that most of these “new and additional” resources would come in the form of Official Development Assistance (ODA). Those hopes have not been met, however. Since 1993, ODA levels have declined by almost 25% (UN, 1998b).

During the same period, total global flows of private capital doubled and, as shown in Figure 5, private investment in developing countries exploded. Even with the current global financial crisis, the IIF estimates that net private flows to developing countries will remain over four times larger than official flows in 1998 and 1999.

**Figure 5: Private Flows (“PF”) to Developing Countries vs. ODA
1990 through 1999**



Sources: World Bank (WB), 1998; IIF, 1998.

Notes: World Bank data for 1997 are preliminary. IIF data for 1997 are an estimate while those for 1998 and 1999 are a forecast (f).

The shift from foreign aid to private investment is a good thing. Governments cannot achieve sustainable development acting alone. They certainly cannot create or provide all or even a majority of a nation’s wealth. Rather, as discussed below, their role should be to set and oversee the frameworks for private economic activity -- including environmental considerations.

The shift does not, however, decrease the importance of foreign aid, effectively applied. Many developing countries have been left out of this surge in private capital flows. Between 1990 and 1997, nearly 80% of the private investment in the developing world went to three regions (Asia, Latin America and Central Europe) and twelve countries (Argentina, Brazil, China, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Russia, Thailand and Turkey)(World Bank, 1998a). While these countries represent a large percentage of the world’s total population, and several have great stores of biodiversity, they are only a few in number. Other developing nations struggle to increase their share of private flows. Those that are not successful, particularly in sub-Saharan Africa or parts of South Asia, are in serious danger of being left further and further behind. To the extent that foreign aid can help

more of the developing world tap into global flows of private capital, and weather the storms therein, it is an appropriate and important use of taxpayers' money.

As a result, both in theory and in practice, international private capital flows are an essential part of financing a sustainable future. In theory, because most countries have chosen a market economy. In practice, because domestic capital and ODA are insufficient to meet the needs of many developing nations. The question then becomes how to harness the power of private capital to the end of sustainable development.

(b) *FDI is the Most Desirable Form of Private Development Finance*

FDI is often viewed as the most desirable form of international private development capital:

- “Foreign direct investment can be an especially fruitful form of financial inflow, which is why it is often encouraged as one of the first components of capital inflows to be liberalised.” (UN, 1998a)
- “If developing countries are to get more global knowledge, they need to attract more FDI.” (World Bank, 1998b)

The characteristics of FDI that support this view include its long-term nature, relative stability, contributions to economic growth, and potential for knowledge transfer (OECD, 1998b).

Clearly, FDI cannot and should not be the only form of international private capital to which a country has access (The Economist, 1998). Local and international commercial banking, along with securities markets, are all important parts of the financing mix.

Given the long-term interests of foreign direct investors and their focus on market growth, their goals for a country's pattern of development are likely to be close to those of the host government. This provides the first important building block for the effort to use FDI as a vehicle for integrating investment and environmental factors.

(c) *Increased Reliance on Private Investment Changes, but does not reduce, the Role of Governments*

Some government officials, however, appear to hope that bringing private investors into traditionally government-run operations -- from manufacturing to infrastructure -- ends their involvement. Finding that they are mistaken often comes as a shock.

Instead of ending, the role of governments shifts from being the provider of the service to its enabler and overseer. Governments enable private involvement by setting the frameworks for private investment and environmental performance. They oversee private involvement by monitoring the functioning of both the frameworks and the private entity, and taking action when either fail to perform. These critically important roles have at their core creating market frameworks (such as for private property rights) and addressing market failures (such as the pollution of public resources).

This is where the policy recommendations of the environmental and investment communities start to come together. Both want clear, predictable, transparent regulatory frameworks, consistently

applied. Both want to see foreign aid used to build the capacity of host countries to adopt and maintain such frameworks. Increasingly, it is in each of their interests to have environmental considerations integrated into national investment frameworks.

(d) *More Environmental Policy Leverage Exists over FDI than any other Form of Private Investment*

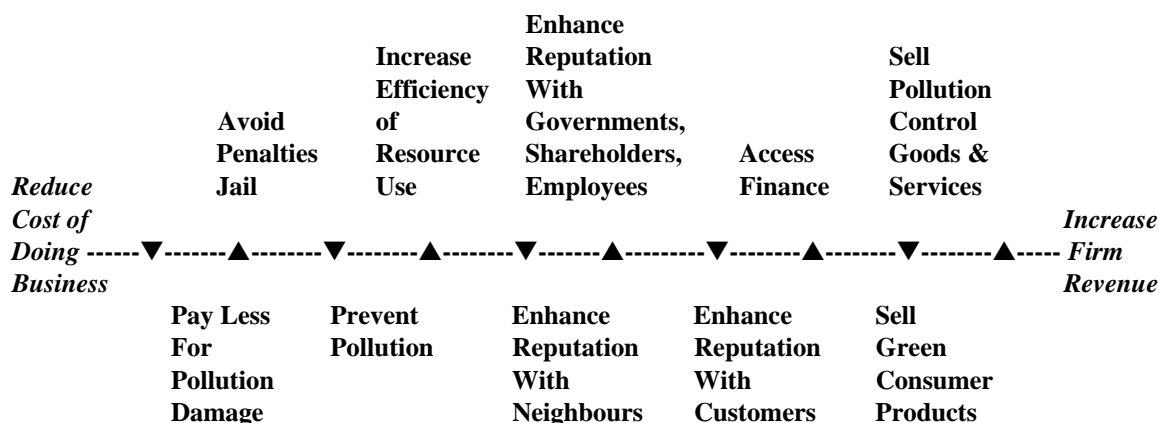
Analysing the environmental aspects of their operations is particularly important for foreign direct investors. FDI is the largest type of international private investment most directly implicating environmental matters (Gentry, 1998a). It often goes directly into resource extraction, infrastructure or manufacturing operations, with all of the potential environmental impacts they raise.

These potential impacts, in turn, generate commercial pressures on foreign direct investors to integrate environmental issues into their investment decision-making in ways not shared by most other investors. Portfolio investors in equities or debt are generally one step removed from the actual operations and can transfer their interests more rapidly (Fernandez et al., 1998). Commercial banks can face similar environmental pressures in their longer-term, real estate backed lending, but are often looking at short-term working capital loans facing fewer environmental risks (Ganzi et al., 1998).

The results are both greater opportunities for leverage over the environmental aspects of private investment decisions with FDI, as well as greater potential for affecting -- either positively or negatively -- environmental conditions. Using this leverage requires an understanding of how environmental issues can affect the operations of foreign direct investors. As shown in Figure 6, private firms face a spectrum of commercial reasons for choosing to improve their environmental performance, ranging from reducing costs to increasing revenues.

Whether and how any particular firm chooses to ignore or act on these factors depends on the internal and external cultures in which it operates. Customers, shareholders, competitors, governments and environmental organisations all play critical roles in defining the environmental aspects of that external culture.

Figure 6: Potential Commercial Benefits of Improved Environmental Performance



Source: Yale/UNDP Public-Private Partnerships Program, 1998.

Given the visibility and scope of their operations, MNEs, particularly those from industrialised countries, are under considerable pressure to address the major environmental risks and opportunities facing their operations. A recent review of Latin American cases where FDI led to improved environmental performance, even in the absence of local enforcement, identified five key sources of commercial advantage for investors (Gentry, 1998a):

- *improved access to export markets*, such as through the adoption of environmental management systems or the use of product “eco-labels;”
- *increased productivity*, through more efficient use of raw materials and other inputs;
- *maintenance of a “social license” to operate*, in the face of local and international pressure from neighbours, environmental NGOs, shareholders and customers;
- *access to finance*, where international financiers increasingly require environmental risks to be addressed and, in some cases (such as the World Bank Group), “supra-national” environmental guidelines to be met; and
- *“environmental” investments*, in water systems, cleaner energy and other projects.

These commercial incentives for improved environmental performance can then be used to help guide efforts to integrate investment and environmental considerations.

(e) Host Country Governments have Room to Integrate Investment and Environmental Factors into their Development Frameworks

Many government officials, particularly those in the investment promotion and finance ministries, appear to believe that attention to environmental matters will drive private investors to

competing countries. Concern is frequently expressed that effective national environmental programs always mean increased capital and operating costs. In an increasingly competitive world, the possibility of adding more cost to an investor's production base is viewed with alarm. In turn, this leads to charges by environmental advocates that governments are in a "race to the bottom" in lowering their environmental standards and that multinational investors are seeking out "pollution havens."

If the goal is to promote medium to long-term investment in productive operations, particularly through FDI, both the governments' and the environmentalists' concerns are overstated. What the vast majority of private direct investors value above all is predictability. The lack of clear environmental standards, or their inconsistent application, is viewed by many FDI investors as an increased risk, not an inducement.

The integration of predictable environmental standards into investment promotion frameworks reduces these risks and will not drive private direct investors away. As described above, most choose their investment locations for other reasons, e.g. market size, growth potential, access to labour or natural resources. Even in the absence of effective national environmental programs, companies operating in the global marketplace face a range of pressures to improve their environmental performance. While environmental costs can be significant in some sectors, they are not major competitiveness factors for most industries. Interestingly, the World Bank's 49 "Competitiveness Indicators" do not even include environmental regulation as a relevant factor (World Bank, 1998c) and the top ten entries in the "World Competitiveness" rankings all have extensive environmental programmes in place (IMD, 1998).² One study even found that transnational corporations adhering to high environmental standards in all the economies in which they operate, including emerging markets, have higher market values than their competitors (Dowell et al., 1998).

As a result, governments have more room than they think for integrating environmental factors into their investment promotion efforts. For example, privatisation's have been both delayed for not addressing environmental matters (the Centromin mining operation in Peru) and made more valuable when environmental issues are addressed (the AHMSA steel plant in Mexico)(Gentry, 1998a).

(f) *Both the Amount of FDI and its Environmental Content can be Increased by Shaping Markets and Promoting Collaborations*

Foreign direct investors seek to increase their profits. They do so by applying their investment capital as efficiently as possible to minimise risks and increase returns. How they do so is driven by the markets in which they operate and the relationships they build.

Integration efforts should seek to optimise investment and environmental goals by affecting these markets and relationships. They must incorporate the reasons why foreign direct investors choose particular locations, as well as the reasons why firms improve their environmental performance. They must reflect society's (broadly defined) goals for economic development and environmental protection.

There is no one, "right" way to conduct this process of integration. By its very nature, it will be a complex undertaking, reflecting many different values and approaches across countries, cultures and organisations. Some of the touchstones for such processes include the following.

² The top ten countries are: United States, Singapore, Hong Kong, Netherlands, Finland, Norway, Switzerland, Denmark, Luxembourg, Canada.

(i) Shaping markets

Two factors are critical to shaping markets for increasing the amount of FDI in a manner consistent with sustainable development: creating effective regulatory frameworks and spurring customer demand.

- *Creating regulatory frameworks.* As noted above, setting the ground rules for the functioning of a market economy remains a key role for governments in both the financial and environmental arenas. These rules define the basic framework within which foreign direct investors must operate when producing and selling their goods and services.

From both an investment and an environmental perspective, key components of an integrated regulatory framework are property rights, prices, information and implementation capacity. Property rights are the cornerstone of both private investment and private conservation of natural resources (Rose, 1997). The prices of local goods and services, including the use of energy and natural resources, directly affect the behaviour of private firms. Increased access to information on environmental risks, along with other factors affecting the likely success of an investment, is of growing importance to foreign direct investors. None of these rules are of any use, however, if they are not effectively implemented.

A growing menu of policy options exist for attracting FDI (UNCTAD, 1998) and for protecting the environment (USOTA, 1995). Many different actors play key roles in their adoption and implementation. Suggestions for steps they can take to integrate investment and environmental goals are described below.

- *Spurring demand.* In addition to basic regulatory frameworks, markets, and hence private investment, are shaped by customer demand. If the demand is not there for environmentally responsible goods or services, few potential investors will be interested, be it for pollution control equipment or sustainable forest products.

Building demand for improved environmental performance or sustainable products involves a wide range of actions. Some are related to the basic regulatory frameworks described above, particularly product restrictions, resource pricing and product information. Others go to changing basic consumer preferences or developing supply chains for meeting existing, unmet demands. Again, a wide range of actors play key roles in spurring demand and some specific suggestions are provided below.

The goals of these efforts to shape markets are:

- to optimise investment and environmental objectives;
- by combining effective regulatory frameworks;
- with broader commercial incentives;
- to make profitable private investments;
- consistent with a sustainable future.

FDI's focus on market size, growth and stability, as well as the resources it brings and its direct links with the environment, make it an especially useful vehicle for efforts to meet these goals.

(ii) Promoting collaborations

FDI also provides unique opportunities for collaborations to address priority environmental issues. Increasingly, traditionally adversarial parties -- businesses, governments, NGOs -- are finding that they cannot meet their core goals acting alone (Gentry and Fernandez, 1998). Businesses need governments to set and implement basic market rules. Governments need businesses to invest in socially beneficial projects. Environmental NGOs need access to additional resources and know-how to improve or protect the natural resource base. Collaboration on areas of shared need is one way to respond.

A growing number of businesses, governments and NGOs are finding that they share interests in at least some aspects of environmental protection (Nelson, 1996). As described above, businesses have more opportunities for capturing commercial advantage through improved environmental performance. Governments have room both to sponsor opportunities for profitable "environmental investments" (such as in water systems) and to integrate environmental factors into their broader investment frameworks. Environmental NGOs have increased their collaborations with firms, on activities ranging from new product development to social development plans for new resource extraction activities (McPhail and Davy, 1998).

FDI can provide a focus for these collaborative efforts. Interested MNEs (and not all will be) can bring useful financial and technical resources to bear. Their involvement may be motivated by business goals ranging from increasing revenues (by selling pollution control goods or services) to enhancing their reputation with key stakeholders (such as employees, shareholders, governments and neighbours). If governments and NGOs understand the basis for MNE involvement, as well as its limits --MNEs will rarely engage in activities that are not to their commercial advantage (however broadly defined) -- considerable progress can be made on specific projects.

Collaboration is a complement to, not a substitute for, basic regulatory frameworks. As noted in Figure 7, even where the private sector provides many traditionally public services, it does so within an enabling and oversight framework established and maintained by governments. Collaboration can, however, help define the scope of the necessary requirements, as well as ease the process of their adoption and implementation. All of the actors traditionally interested in the FDI and environment linkage can play key roles. Specific suggestions are provided below.

Figure 7: Allocation of Public-Private Responsibilities Across Different Forms of Public-Private Collaboration in the Provision of Urban Environmental Services

| | Setting Performance Standards | Asset Ownership | Capital Investment | Design & Build | Operation | User Fee Collection | Oversight of Performance & Fees |
|------------------------------------|-------------------------------------|--------------------|-----------------------|-------------------|------------|------------------------|---------------------------------------|
| Fully Public Provision | Dark Gray | Dark Gray | Dark Gray | Dark Gray | Dark Gray | Dark Gray | Dark Gray |
| Agreeing Community Standards | Light Gray | Dark Gray | Dark Gray | Dark Gray | Dark Gray | Dark Gray | Dark Gray |
| Passive Private Investment | Dark Gray | Dark Gray | Light Gray | Dark Gray | Dark Gray | Dark Gray | Dark Gray |
| Design and Construct Contracts | Dark Gray | Dark Gray | Dark Gray | White | Dark Gray | Dark Gray | Dark Gray |
| Service Contracts | Dark Gray | Dark Gray | Dark Gray | Dark Gray | White | Dark Gray | Dark Gray |
| Joint Ventures | Dark Gray | Light Gray | Light Gray | Light Gray | Light Gray | Light Gray | Dark Gray |
| Build, Operate, Transfer Contracts | Dark Gray | Dark Gray | Dark Gray | White | White | Dark Gray | Dark Gray |
| Concession Contracts | Dark Gray | Dark Gray | Dark Gray | White | White | White | Dark Gray |
| Passive Public Investment | Dark Gray | Dark Gray | Light Gray | White | White | White | Dark Gray |
| Agreeing Private Standards | Light Gray | Dark Gray | Dark Gray | White | White | White | Dark Gray |
| Fully Private Provision | Dark Gray | Dark Gray | Dark Gray | White | White | White | Dark Gray |

Source: Yale/UNDP Public-Private Partnerships Program, 1998.

Key: Dark gray square = public responsibility

Light gray square = shared public/private responsibility

White square = private responsibility

(g) Success with FDI can Pull Along other Types of Private Investors As Well

The impacts of successful efforts to shape markets and promote collaborations go beyond FDI. Domestic investors will be affected, as will other types of international private investors. Many of these effects will occur for exactly the same reasons that foreign direct investors are affected, changing the commercial context in which businesses operate. In addition, foreign investors themselves can help carry the work to other parties, as described below.

(i) Local firms

In countries without strong environmental systems in place, foreign direct investors can help improve the environmental performance of local firms in several different ways. First, they can bring environmental matters into the local business equation, not just with their partners (by installing environmental management systems), but potentially with their local suppliers (by requiring that certain environmental standards be met) and competitors as well (by using environmental factors as a source of competitive advantage). Second, they can provide training and capacity building for local firms (as described in Box 1).

Box 1: Public-Private Collaboration on Environmental Training for SMEs – ISO 14000 and Eco-efficiency

Philips Electronics and other member companies of the World Business Council for Sustainable Development (WBCSD) are working with UNDP to provide training and mentoring programmes for small and medium sized businesses in developing countries.

The training efforts build from the fact that an increasing number of multinational companies are sending environmental trainers around the world to work with personnel in their own facilities. Companies like Philips are happy to have their trainers stay an extra day or two and run the same training for interested local companies, technical institutes and government agencies. Already they have done so in India, China and Brazil.

Source: Yale/UNDP Public Private Partnerships Program, 1998.

Third, foreign direct investors may also push host country governments to implement their existing environmental programmes in a more consistent and predictable manner, including against local firms. Often, these initiatives stem from the foreign investor's concern about discriminatory treatment on environmental matters (Gentry, 1998b). Since MNEs have the capacity and resources to meet or exceed local requirements in most cases, their interest is usually not in the level at which a particular standard is set but whether it is applied in a predictable, transparent and consistent manner; much the same as for investment related standards.

Obviously, foreign direct investors' interest in a consistently applied regulatory system raises the spectre of unfair competition against local firms (if they are unable to meet the requirements) or of the host country government ignoring the violations identified by the foreign investor (Gentry, 1998a). These issues need to be taken seriously and handled sensitively. It may be that any effort to have more consistent application of existing environmental standards should be accompanied by a capacity building programme for local firms (in which foreign investors might play a part), as well as a timetable for implementation.

(ii) Other international investors

In addition to consistently applied local standards, foreign direct investors may have an impact on other international investors by increasing the amount of information available on the investment and environment link. This may happen in at least two ways.

First, many foreign direct investors use their “due diligence” process to gather information on the environmental risks and opportunities facing potential investments in order to determine how best to address them. To the extent that this search for environmental information builds the capacity (through the development of local consultancy firms) or requirements (such as in privatisation or infrastructure transactions) for providing such information, it will be available to other private international investors as well.

Second, an increasing number of companies, including many involved in FDI, are attempting to communicate with portfolio investors in new ways on environmental matters (Descano and Gentry, 1998). Instead of focusing solely on the commercial risks posed by environmental factors, they now believe that attention to environmental issues can increase their competitive advantage, as well as shareholder value (Blumberg et al., 1997; Arnold and Day, 1998). Since the companies themselves are the primary sources of information to financial analysts evaluating possible investments (Gentry and Fernandez, 1997), their efforts are likely to lead an increasing number of mainstream portfolio investors to consider environmental factors.

4. Suggested Areas of Work for Key Actors

FDI can be a vehicle for integrating investment and environmental objectives, but only if both “baners” and “booners” are active participants in the effort. Baners need to ensure that environmental factors are effectively incorporated into basic market frameworks. Booners need to ensure that the frameworks encourage private investment. Both need to participate in collaborations likely to advance their respective interests.

Baners and booners will never need to agree, however, on whether FDI -- on balance -- is good or bad for the environment. There is more than enough work to be done as part of the integration effort that both can find tasks consistent with their beliefs and the information they generate.

Some of these tasks are described in this section. All of them are aimed at the key areas identified above:

- shaping markets, by creating regulatory frameworks (property rights, prices, information and implementation capacity) and spurring demand; and
- promoting collaborations.

Instead of repeating the long lists of recommendations on FDI and the environment that have been provided elsewhere (French, 1998; Gentry, 1998a), the following highlights a few areas of major opportunity or need. Many others exist.

(a) *Host Country Governments*

The most important action by host country governments is to take environmental matters seriously as part of their national development plans. This means identifying priority environmental pressures (such as the provision of drinking water; see World Bank, 1997), and making resources available to address them either directly or through the involvement of the private sector.

A good starting point is integrating environmental factors into the framework for private investment in infrastructure and other existing government operations (such as manufacturing). Potential foreign investors will require information on the environmental risks facing these operations. They will seek predictable and effective regulatory frameworks. Governments will reduce the risk (thereby often increasing the value) of the investment by addressing these concerns directly. Once the investment is made, new resources and technical know-how will be available for helping to address the existing problems in a cost-effective manner. Governments will be able to oversee the investor's compliance with the applicable standards and take appropriate action in case of failure.

For investments in new production operations, particularly resource extraction in formerly undeveloped areas, MNEs face increasing international pressure to obtain a "social license to operate" (as discussed above). They are also usually choosing the location because of the presence of the resource in question, not because of the absence of local environmental pressures. This combination again creates strong incentives for investors and governments to address environmental issues as part of the transaction process. Requirements for environmental reviews are an important part of this process, for both parties. The challenge is to conduct the review in a way that is neither a sham nor a roadblock but an inclusive, valuable method for effectively identifying and resolving priority issues in a timely manner.

Beyond these investment specific opportunities, host country governments should also assess the functioning of their regulatory systems. Do they provide market frameworks and incentives that encourage increased private investment in a sustainable future? If not, changes should be made. In some countries, this might involve implementing the existing requirements that have lain idle in the law books. If those existing requirements do not meet local needs or capacities, host country governments should consider starting a dialogue with foreign direct investors, local industry, environmental advocates, and civil society on adopting locally effective requirements that address priority environmental issues (Gentry, 1998c).

(b) *Source Country Governments*

Since most source countries are industrialised countries, they are also the largest host countries for FDI. As such, any recommendations for host country governments apply equally to them and pose large challenges to traditional environmental policies (as discussed below).

In addition, there are three major areas in which their actions can help the integration of investment and environmental considerations in other host countries: ODA; domestic standards; and domestic markets.

First, the primary focus of ODA should shift from supporting government operations in all developing countries to a two-part strategy: (a) using ODA to catalyse additional private investment consistent with a sustainable future; and (b) focusing ODA on the poorest countries. Much of this work

has already started. More ODA funds are being used for guarantees, loans and equity investments alongside private capital. The growing awareness of the critical need to build the capacity of government officials as enablers and overseers of private investment in infrastructure is leading to the creation of new, multi-donor technical assistance programs. Some countries already include environmental factors in their review of aid requests; more should.

Second, source countries that have high domestic environmental and financial standards should maintain them. Much of the pressure on MNEs to address environmental issues in their global investments arises from forces in their home country. High environmental and financial standards have not hurt, and many people think they have helped, the competitiveness of countries such as the US and Germany. Maintaining, or even increasing these pressures, will intensify the commercial pressures on MNEs to act as catalysts for integrating investment and environmental considerations in host countries.

Third, source countries should find ways to use their domestic markets to help spur demand for sustainable investments. For example, banana producers in Costa Rica were starting to apply much higher environmental management standards than those in neighbouring countries as part of their effort to increase sales in Europe until the EU reduced its quotas for Central American bananas (Rivera and Brenes, 1998). The Clean Development Mechanism (CDM) under the Kyoto Protocol to the climate change convention, however controversial, offers industrialised countries the possibility to create investment opportunities in developing countries by offering regulatory credits to domestic firms. Reducing subsidies for environmentally damaging domestic agricultural operations could also create new opportunities for investments in more sustainable production.

(c) Multilateral Organisations

Multilateral organisations (such as the OECD, development banks and UN bodies) should use their convening power to support integrative and collaborative activities (in addition to applying any ODA funds as described above).

Experiences integrating investment and environmental frameworks need to be collected and shared. While many events bring together either the investment or the environmental communities, few combine the two. Doing so is necessary both to understand the different perspectives and approaches being brought to the table, as well as to catalyse concrete action in specific cases.

This experience also needs to be applied. Multilateral organisations can facilitate this by providing on-going support to collaborative efforts that address specific issues at the local, national or regional levels. Collaborations require a focus. Solving a shared problem in a particular context can provide that focus -- whether it be a poorly functioning regulatory system or an inadequate water supply. If foreign direct investors are affected or present, they can bring additional resources to bear on its solution. Multilaterals should work with host country governments, local and foreign industry organisations, environmental and community organisations, and others to help apply these resources to priority issues.

(d) Foreign Direct Investors

First and foremost, foreign direct investors should keep investing -- and find new markets in which to do so. Beyond that, they should also take a number of steps that increasingly make good business sense, for all of the reasons discussed above:

- *apply global environmental management systems.* Many different approaches are available. One size does not, and never will, fit all. Firms should choose systems that work for their internal and external cultures. The touchstone should be whether the system helps the company manage the risks and capture the opportunities in a manner defensible to its major environmental stakeholders, broadly defined (employees, shareholders, customers, regulators, neighbours, media and others).
- *promote effective regulatory frameworks.* Predictable and transparent regulations consistently applied is what foreign direct investors look for in the financial and, increasingly, in the environmental arenas. Contacts with governments and others should be used to support this goal.
- *collaborate on priority local issues.* Considerable amounts of local goodwill can flow from making acceptable levels of firm resources available for partnerships to address specific environmental problems.

(e) Environmental NGOs

Environmental advocates need to encourage increasing amounts of private investment in sustainable development. They can do so by understanding the leverage points for private investors and applying them in the three areas noted above: creating regulatory frameworks (design and implementation); spurring demand; and promoting collaborations.

Many excellent initiatives are already underway in each of these areas. Three specific areas in which further NGO support would be most useful are:

- *build host country political support for effective, integrated regulatory frameworks.* Significant change to regulatory systems or their implementation requires local political support. Broad political support for addressing any underpricing of environmental resources will only exist if it can be shown as not interfering with local development priorities (ranging from human health to export promotion). NGOs can help inform and rally such support.
- *participate in investments with strong environmental links.* NGOs can help intensify the incentives for foreign investors and governments to address environmental issues as part of new investments (as discussed above), as well as help them do so. Clearly, they should participate in environmental review processes. In addition, they should seek out opportunities to work with investors to design acceptable investment requirements as well as methods for monitoring and ensuring that the requirements are met.
- *demonstrate the profitability of sustainable private investments.* Both governments and private investors are looking for profitable, “sustainable” investment opportunities. Few

have the expertise or the commitment to develop such deals across a wide range of sectors or locations. NGOs should use their networks to work with those that do exist to develop, test, replicate, and incorporate such opportunities into the broader policy and investment communities.

(f) *Financial Institutions*

Financial institutions should ask questions about the links between environmental and financial performance. As the scope of the potential commercial impacts of environmental factors grows, so too does the range of their financial impacts. Financial analysts who identify those with material financial consequences ahead of their competitors will have an advantage. While it is up to the companies to demonstrate that environmental issues are financially significant, financial analysts should increasingly seek information on environmental factors as part of their investment calculations.

(g) *Individual Consumers*

Consumers should be encouraged to buy competitively priced “sustainable” products. They should also support efforts -- from product information to resource pricing -- to make more such products available. It will be up to companies and NGOs to offer information and products to help spur the demand, and governments to create market frameworks supportive of their efforts.

5. *Issues Requiring Further Consideration*

There are numerous opportunities for using FDI as a vehicle to apply more private investment to the goal of sustainable development. However, even if all the recommendations outlined above and in the cited papers are adopted, other areas still need to be addressed in order to carry us closer to that goal. Some of the major remaining hurdles include the following.

(a) *Increasing the Environmental Sustainability of Capital Flows among Industrialised Countries*

The vast majority of private capital flows is among industrialised countries. How these flows are applied is at least as important to the sustainability of world development as are flows to the developing world. Particularly in the US, the sustainability debate, with its implications for the efficiency and equity of resource use, has yet to be reflected in the environmental protection regimes built up over the past 25 years. As a result, even though foreign direct investors in the US are likely to meet US standards for environmental protection, it is much less clear that meeting those standards makes the investments environmentally sustainable. More fundamental changes in the primary focus of environmental policy, from pollution control and clean-up to materials flows and resource use efficiency, are required (Powers and Chertow, 1997).

(b) *Linking the Environmental and Social Components of Sustainable Development*

This paper considers only two of the three aspects of sustainable development, economic and environmental performance. Improving social welfare has not been addressed. There is a common perception that social welfare and environmental protection are at odds; witness the debates about “jobs versus the environment” or “people versus parks.” While the links between economic development and both social and environmental factors have been extensively pursued, the work linking social and environmental considerations is less well developed. Such inquiry tends to be politically sensitive and complex. It has become almost a cliché to say that poverty is the most serious environmental threat, while leading to little actual integration of social or environmental programmes. Expansion of the efforts to bring the social and environmental dimensions of sustainable development together remains critical.

(c) *Starting the Journey toward Sustainable Development*

Finally, this paper takes a “bottom-up” approach, identifying factors that are already affecting investor behaviour and using them as the base for integrating investment and environmental policy. The question that remains is whether a multitude of such incremental improvements in environmental performance will be sufficient to place the world on a sustainable path. Many environmental advocates believe that much more fundamental changes in production and consumption patterns are necessary. Even if more fundamental change is required, however, that change will come about best through private initiatives responding to market frameworks and incentives shaped by customers and investors, with input from governments, NGOs and other interested actors.

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HAVENS, HALOS AND SPAGHETTI: UNTANGLING THE EVIDENCE ABOUT FOREIGN DIRECT INVESTMENT AND THE ENVIRONMENT

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Executive Summary

In the context of increasing globalisation of capital flows, the impact of foreign direct investment (FDI) on the environment is a topic of hot debate. Environmentalists have argued that gaps in national environmental standards draw the dirtiest OECD industries to developing countries, creating “pollution havens” and propelling a global “race to the bottom” in environmental standards. Free marketeers counter with claims that global market forces diffuse best management practices and that foreign companies, typically from the OECD, create “pollution halos” in developing countries.

This paper examines the evidence in support of both claims. Part 1 describes what is at stake in the debate, *viz.*, the shape and content of emerging global and corporate governance of investment. Part 2 develops an analytical framework to map potential linkages between FDI and the environment, including micro-level decisions, such as industry location and firm environmental performance, as well as macro-level impacts on eco-systems, indigenous cultures, income and consumption.

Part 3 summarises and evaluates the statistical and case study evidence. Statistical studies focus in the main on two issues: 1) whether and how environmental regulation influences industry location; 2) what determines firm level environmental performance. The studies suggest first, that differences in environmental standards and/or abatement costs have not made a significant difference to firm location decisions; and second, that firms, both domestic and foreign, are incrementally improving their environmental performance in many parts of the world, primarily in response to effective national regulation and/or local community pressure. There is thus little statistical evidence of either a “pollution haven” or a “race to the bottom.”

There is also little statistical evidence that foreign firms consistently perform better in developing countries, especially once the firms’ size is taken into account. In some sectors, notably energy, foreign firms are likely to have superior technology, or close links to “green consumer” markets. In the main, however, foreign links, including export markets and ownership of plant, seem to make little difference to firm performance. While foreign direct investment may offer benefits in particular sectors in particular countries, there is no broad “pollution halo” for FDI in general.

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The case studies paint a more muddy picture. There are cases of egregious local and even national ecological degradation. While foreign firms may not have been drawn in by lower standards, they clearly perform like environmental renegades once they get there. In addition, there is evidence that policy makers are sensitive to potential effects of higher environmental standards on foreign investors. They may not weaken standards, but they do not enforce them either.

On the other hand, there are cases where foreign firms have brought with them higher standards and better management practices, as well as cleaner technology, and cases where foreign firms were the first to respond to consumer pressure for a “greener” product or production process. These improvements, however, have been incremental and have not grappled with larger ecological impacts. The move from more to less toxic banana production in Costa Rica is a good example: while the reduced use of toxic agro-chemicals is to be welcomed, it does not address the widespread damage caused by large-scale mono-cultural production. “Halos” exist but, to date at least, they are apparently pretty small.

Part 4 reflects on the evidence as a whole and offers four insights. First, the mix of demonstrated positive, negative and neutral effects of foreign direct investment mitigates against any overarching conclusion about its incremental effects “on average.” There *is* no average, performance is context-dependent and other things are far more important than ownership. If the goal is improvement in industry environmental performance, at both micro and macro levels, then what is needed is effective regulation utilising both governments and communities to monitor, reward and sanction firms.

Second, a concern to attract or retain investment by multinational corporations in a highly competitive global economy has kept a lid on local/national standards or enforcement of standards. While there has not been a universal “race to the bottom,” increased globalisation -- lacking a global regulatory framework -- has inhibited a “race to the top” and caused environmental commitments to be “stuck in the mud.”

Third, while “pollution havens” cannot be proven, a pattern of agglomeration of pollution is discernible, one based not on differences in national environmental standards but on differences in the income and/or education levels of local communities. There may not be “havens” but there are clearly “pollution zones” of poorer people, both within and across countries, where firms perform worse and where regulation is less effective.

Fourth, the quality of the evidence, both statistical and case study, is poor compared to the research needs. The statistical studies utilise aggregate industry-level data which provide no insights about factors influencing the location of particular production stages within globally sourced industries. Moreover, most of the statistical studies rely on narrow and partial indicators of plant-level environmental performance, or use proxies for data that are simply not available. The case studies suffer from data problems as well, including the lack of ecological performance indicators, information about social preferences, and the lack of analytical frameworks to link macro and micro ecological impacts.

Finally, there is a great gulf between what the statistical studies demonstrate and the issues at stake in the debate. Sifting through the evidence thus feels like searching for a small meat ball in a large bowl of spaghetti. In general, the gulf can be characterised as a “micro-macro” problem and reveals the different environmental paradigms at play. Based on a “pollution prevention” paradigm, the statistical and some of the case studies utilise narrow measures of environmental performance; often, just one particular pollutant. Environmentalists, however, are concerned not only about pollution but the “environmental management” of eco-systems as a whole, and more broadly about the “sustainable” and “just” development of societies at a global level. In some of the case studies, foreign direct investment is scrutinised not only as a contributor to local air and water emissions, but also as a macro-phenomenon

contributing to the scale of ecological degradation, as well as impacts on local political economy, indigenous rights, and community health and welfare.

The “micro-macro” problem suggests that there is a large gap between even the best of the documented incremental improvements in company performance and the scale of ecological impact caused by broadly unsustainable production and consumption patterns at the global level. The wealth of northern consumers might be helping to make products marginally “greener,” but under current institutional and regulatory regimes it is also putting a heavy burden on the earth. It is in this sense that the claim that foreign direct investment is “bad” for the environment has credibility.

Part 4 concludes with some recommendations about how to enlarge the environmental benefits of FDI. First, it is clear that regulation matters. Without obviating the need for local regulation, there is a great need for an *overarching global framework* to define -- and raise -- the environmental responsibilities of foreign investors. Only by setting common responsibilities for all transnational investors will policymakers escape the competitive race for FDI which keeps environmental commitments “stuck in the mud.” Located within a set of global rules governing investment, environmental norms should include both micro level investor responsibilities and macro level sustainability objectives. The process of generating and monitoring global rules should provide ample opportunity for input by environmental NGOs and other community pressure groups.

Second, it is important to build national-level governance capacities of two kinds. First, governments need to establish their broad *development objectives*, including social, environmental, and economic goals, and the role of FDI within these. Second, governments need to develop capacities for the *effective environmental regulation of all industry*, whether domestic or foreign in ownership, in step with economic growth. To ensure that they are congruent with development objectives, investment projects should be subject to preliminary “strategic environmental assessment”. Local regulators could benchmark to relevant global (or regional) standards, as well as regulate locale-specific environmental impacts. The enforcement of environmental regulation could take the form of “command and control”, market-based economic instruments, and an enhanced community role in monitoring via public disclosure, as well as participation in industry and development planning.

Third, there is an urgent need to develop innovations in *corporate governance* which directly enhance corporate social and environmental accountability. Many transnational corporations have adopted “codes of conduct”, ISO 14,001 or other forms of voluntary self-regulation. Rarely, however, does voluntary self-regulation encompass any internal or external compliance mechanisms. Increasing the likelihood of compliance requires at the least that companies measure environmental impacts and disclose information to regulators, impacted communities, and the public. Useful internal governance tools might include environmental auditing and reporting, environmental management systems, and independent certification. Useful external governance tools might include mandatory disclosure requirements and mandatory third-party certification.

Fourth, governments need to invest more resources in developing *ecological metrics and data*, and making data available to the public. To enhance the potential environmental benefits of FDI, environmental regulation, whether global or national, needs to be “performance-driven.” Regulators, company managers, local communities, and the general public need first to know what the environmental impacts are, both at a micro and macro level, and how to quantify them. Developing common metrics would also allow company managers and policymakers alike to determine and promote “best practice”.

* * * * *

1. FDI and the Environment: The Debate

The 1990s witnessed a sea-change in the pattern of international capital flows to developing countries. In 1990, public (“official”) sources accounted for more than half of international capital flows to developing countries. By 1995, 77 per cent came from private sources.¹ The biggest change was the explosion in portfolio (equity and debt) investment and, to a lesser extent, commercial bank loans. From a total of about US\$5 billion in 1990, portfolio investment soared to US\$61 billion in 1995 and leaped from 5 to 33 per cent of total private capital flows to developing countries (World Bank, 1997).

The story of foreign direct investment is only marginally less dramatic. While its share of total private capital flows fell a little, the volume of FDI nearly quadrupled. Reflecting a strong “rich country bias,” the lion’s share of FDI flows within the OECD area. Nonetheless, developing and transition countries have become increasingly important FDI recipients. In 1990, FDI flows to developing countries totalled US\$25 billion. By 1995, they had jumped to US\$96 billion. While FDI flows were heavily concentrated in twelve countries -- nearly 40 per cent went to China alone -- the small size of many developing economies meant that the economic impacts were felt throughout the world.²

The surge in FDI has been propelled by moves toward trade and investment liberalisation at the global level, as well as the embrace by many developing countries of neo-liberal economic policies, *i.e.* policies that enhance market competition and an outward orientation.³ According to a recent UNCTAD report, 95 per cent of the 599 changes in laws and regulations governing FDI in developing countries between 1991 and 1996 were directed toward liberalisation (UNCTAD, 1997).

Given the lack of effective state regulatory capacities in many developing countries, the growth of FDI has raised concerns about environmental (and social) impacts in both source and host countries. Environmentalists argue that the gap between OECD and developing country standards will draw the worst performing firms and dirtiest industries to the least regulated countries, creating “pollution havens”. Even if not explicitly drawn by low standards firms, lacking external oversight, may perform badly once they get there. Cases of environmental (and social) malfeasance by multinational corporations have been documented. Moreover, many environmentalists argue, the drive to remain or become competitive in a highly globalised economy will drag down standards in OECD countries, creating a global “race to the bottom”.

A neo-liberal approach to the governance of the global economy is characterised by a single-minded focus on liberalisation, without concomitant environmental and social rules and policies.⁴ Advocates of neo-liberal globalisation argue that FDI is positive for the environment because OECD firms typically possess newer and cleaner technology and better management practices. Given the lack of local technological and regulatory capability, FDI is the best way to diffuse best practice production techniques. A number of case studies have demonstrated a “pollution halo” effect, suggesting a slow convergence of standards upwards.

In a review of the literature, the OECD found that FDI generates both positive and negative effects and identified a significant gap in research on the scale effects of FDI.⁵ The most important gap concerns the potential influence of higher incomes on the demand for environmental quality. Many free-market proponents have made much of two studies showing that demand for environmental quality rises with income once income per capita reaches about US\$5 000-8,000 (Grossman and Krueger, 1991; 1994). The studies focused, however, on narrow indicators of local environmental performance, *viz.*, measures of urban air and river pollution in Mexico. Not all the indicators of environmental quality improved with income. More problematically, the studies were blind to and shed no light on other

potential environmental impacts associated with affluence, such as the production of toxic and hazardous wastes, the loss of biodiversity/habitat and atmospheric pollution.

Despite its recognition of the need for further research, the OECD suggests, at least in terms of the primary claims being made, that the impacts of FDI overall tend to be positive. “Fears of a ‘race to the bottom’ in environmental standards, based on the idea of ‘pollution havens’ may be generally unfounded,” the report concludes. Though this conclusion may not hold in specific cases, “FDI is an increasingly important ‘engine’ for sustainable development in many countries” (OECD, 1997, p. 13).

At stake in what is a very heated debate is whether and how to govern FDI (and investment more broadly) at global, regional and national levels. The debate erupted in the context of the North American Free Trade Agreement (NAFTA), giving rise to a set of environmental “side agreements” and the creation of the North American Commission on Environmental Co-operation. The main implication for FDI was that a NAFTA nation could not lower or not enforce its own national environmental standards in order to attract foreign investment, *i.e.* it could not seek to become a “pollution haven.”

The debate went global in the context of OECD negotiations over the Multilateral Investment Agreement (MAI). Environmental (and labour/human rights) activists throughout the world decried the draft agreement because of what they considered its one-sided approach, specifying the rights but not the obligations of foreign investors (Sforza *et al*, 1998). Moreover, except for a draft clause prohibiting the use of lower environmental standards as an investment incentive, it called on states to facilitate and protect only investment and not other social and environmental aspects of the public good. Environmental obligations of investors made an appearance only in the OECD’s Guidelines for Multinational Enterprises, which would have been associated with the MAI in a manner to be specified.

Rules governing investment are also being discussed within the World Trade Organisation, including within the Trade Related Aspects of Intellectual Property Rights (TRIPS). As with its trade negotiations, the WTO’s approach to governing investment is based on neo-liberalism, *viz.*, dismantling national economic protectionism and creating global markets while leaving the social regulation of markets to states.

The capacity of states to effectively govern global markets, however, is highly constrained (Zarsky, 1997). If, as the most ardent free marketeers argue, markets themselves deliver social objectives such as better environmental protection, then there is little need for global environmental regulation. If they do not, as environmentalists argue, then regulation at global and regional levels is needed. Indeed, given both market failure and the governance failure of global economic institutions, a strong voice within the environmental community advocates a retreat from globalisation itself. Others advocate new forms of governance and thus of globalisation.

To date, there has been little political will by governments for global and/or regional social regulation of investment. Rather, there has been an emphasis on corporate “self-regulation” through voluntary systems such as ISO 14000 and codes of conduct. Support for more formal regulation, however, may be growing. The financial and economic crises in Asia have raised a hue and cry about the need to regulate global financial markets. The principle and, in some cases, implementation of common environmental objectives and standards has been embraced by the European Union. In addition to the question of *whether* there should be global regulation, what is at stake in this debate is *what kind* of approach to regulation might be most effective.

This paper examines some of the key evidence in support of claims as to the benevolent or malevolent impacts of FDI within a neo-liberal global governance regime (*i.e.* without global common

environmental and social norms). Part 2 develops an analytical framework to map broadly the potential linkages between FDI and the environment. Part 3 summarises and evaluates some of the key statistical and case study evidence. Part 4 offers four insights about the evidence which suggest some new directions for both research and policy. Part 4 concludes that, to capture the positive benefits of FDI, rules governing investment must explicitly define broad environmental objectives and responsibilities.

2. FDI-Environment Linkages: A Conceptual Framework

The complex and multiple interrelationships between FDI and “the environment” writ large have not been conceptually charted. Analysts and activists have approached the topic from a wide variety of angles, ranging from the pollution propensities of particular foreign firms or sectors to the impacts of environmental standards on competitiveness. Many studies have jumped from very narrowly construed questions to very broad policy conclusions, or *vice versa*.

The OECD characterised FDI-environment linkages in three ways: 1) the environmental effects of FDI-based technology development and diffusion; 2) the impact of environmental standards on investment decisions by firms; and 3) the environmental effects of international competition for FDI (OECD, 1997). While useful, this framework leaves out some of the issues of greatest concern to environmental scientists and advocates, especially the impacts of (neo-liberal) FDI on the scale of ecological impact both locally and globally.

A more expansive framework would include the following:

(a) *Micro linkages:*

- Impact of environmental standards on firm/industry location/investment decisions;
- Impacts of foreign firm technology, management and size on firm-level environmental performance;

(b) *Policy linkages:*

- Impacts of international competition for FDI on environmental regulation/norms;

(c) *Macro linkages:*

- Direct impacts of FDI on the scale of ecological degradation and use of environmental space;
- Indirect impacts on ecosystems and environmental policy of FDI-related increases in income and consumption (given current, Western-style consumption patterns);
- Impacts of FDI on local revenues, including via taxes and royalties, and on the provision of public goods;
- Influence of foreign firms on the local political economy, including environmental policy;
- Socio-environmental impacts of foreign direct investment, including on worker/community health, safety and welfare, and on indigenous cultures;

- Environmental security impacts of FDI-related cross-border pollution/degradation on international conflict and co-operation.

(a) *Micro Linkages*

Micro-level linkages between FDI and environment focus on two main issues: 1) industry location; and 2) firm-level environmental performance. In broad terms, the three possibilities are that FDI enhances, degrades or is neutral to environmental objectives in developing countries.

Pollution Havens

The “pollution haven” hypothesis posits that differential environmental regulations influence firm (or industry) level location decisions. There are two variants of the hypothesis. The “industrial flight” variant suggests that pollution-intensive “dirty” industries will flee the relatively higher costs of environmental compliance in OECD countries and relocate where compliance costs are lower. Typically, compliance costs are conceived of in terms of pollution abatement costs which are lower because standards are lower.⁶ However, costs could also be lower because transactions costs of compliance are lower, even if standards are the same (Anderson *et al.*, 1997). What is key is that OECD firms, especially in “dirty” industries such as paper, chemicals, and petroleum, are pushed out by the high costs of complying with environmental regulations. The firms themselves may not physically relocate, but new investment will be skewed towards low-standard locales.

The other variant puts more emphasis on the “pull” factor, that is, on the direct use by developing countries of low or lax environmental standards to attract foreign firms. The reduced pressure on firms to manage environmental impacts may be a central or peripheral part of investment-attraction packages. In either case, the “dirty” industries, which have the highest abatement costs, will be most attracted. Within non-dirty industries, firms with poor environmental performance might also be attracted, as well as “dirty” production stages within particular industries or firms. Some analysts argue that low or lax standards are not the result of deliberate beggar-thy-neighbour policies, but reveal true social preference. A greater tolerance for pollution, they suggest, is a legitimate source of competitive advantage (Jensen, 1996).

Whether “pushed” or “pulled,” dirty industries, dirtier production stages, and poorly performing firms will, according to the pollution haven hypothesis, agglomerate in low-standard developing countries. Leaving aside potential impacts on standards in the OECD (and on local income), would such an agglomeration be “good” or “bad” for the environment in some overall, global calculus? It is possible, for example, that greater social tolerance for pollution might stem from a relatively higher absorptive capacity on the part of local eco-systems in developing countries. If so, then locating dirty industries in developing countries might be “good” for the environment.

On the other hand, given that there are few political or market-based mechanisms by which to reveal social preference, it is far more likely that low standards reveal little about absorptive capacities and much about weak management capacities -- and about elite preferences for rapid industrialisation. Indeed, absorptive capacities might well be lower in many highly-populated developing countries. Moreover, higher incomes in developed countries mean that consumers and workers have a wider set of options about how to deal with pollution.⁷ Richer workers, for example, can live away from polluted production sites, using highways and cars to get to work. Poor workers often cannot. From this perspective, it would be better for the environment if dirty industries were agglomerated in locales where

management capacities and community oversight mechanisms are strongest, and where high incomes provide a wide set of individual options.

The pollution haven hypothesis also raises ethical questions. Even if a skewed pattern of pollution reveals developing country “social preferences” for industrial growth it is unlikely that, given a choice, victims of pollution would choose a dirty and unhealthy environment over clean air, water and other environmental resources. Should the poorer people of the earth have no choice but to sacrifice their own and their children’s health in order to develop economically? Or is there a basic human right, regardless of income, to health and to environment? From an environmental justice point of view, heaping pollution on poor people is akin to discrimination before the law or treating poor people like second-class citizens.

Pollution Halos

The “pollution halo” concept focuses not on industry location, but on the environmental performance of foreign relative to domestic firms. It suggests that what is important is not why a firm locates where it does, but how it performs once it gets there. OECD firms typically have newer, cleaner technologies and better environmental management systems, often as a result of the higher regulatory requirements in the OECD area. Moreover, OECD-based firms often have important export markets back home and are sensitive to the demands of “green” consumers. Assuming that multinational corporations have the same internal company standards and procedures regardless of the country in which they operate, FDI is a vehicle by which to diffuse “best practice” throughout the world.

Besides advantages of technology and management, foreign companies are usually large relative to domestic firms in developing countries. Being big means that a company has deeper pockets for investment in research and development, as well as environmental management systems. As domestic firms learn from and copy the foreign firms, developing country environmental performance will converge towards OECD levels.

It is important to clarify that the “halo” effect requires some discrimination between foreign investors. Obviously, there will be no “halo” effect if the foreign company itself is an environmental polluter. In this context, given the still rudimentary nature of environmental regulation at home, there is more reason to expect that they will diffuse “worst” rather than “best” practice.

It is possible that OECD firms do not in fact maintain the same standards wherever they operate, but respond in a myriad of ways to incentives to lower standards in developing countries. This might include less diligence in environmental impact assessment, less training and/or protective equipment for employees, less investment in monitoring and mitigating pollution, *etc.* Even if internal company standards are the same, the difference in external context, especially the lack of adequate waste management infrastructure and disaster response capacities, may enhance the environmental and health risks of FDI in developing relative to OECD countries.⁸

Finally, it is possible conceptually that, under current rules, FDI brings neither much of a halo nor an agglomeration of dirty industries in low standard countries. Rather, the effects of environmental regulation might be small or irrelevant compared to other determinants of industry location, such as transport costs and wage rates; and other determinants of environmental performance, including government regulation, income and community pressure, might matter much more than foreign ownership or links to OECD markets.

(b) Policy Linkages

The micro linkages outlined above focus on the impacts of environmental norms on firm decisions. Another set of FDI-environment linkages focuses on the impact of economic integration on environmental standards and norms. Like other forms of regulation, environmental standards are subject to convergence pressures in a global economy. The immediate issue is that, in the context of neo-liberal globalisation (*i.e.* where market access is secured but there are no common environmental norms governing investment), concerns to retain or gain competitiveness could conceivably drive OECD standards down. A process of downward harmonisation would result in a “race to the bottom”.

Another variant on the theme of convergence is the “stuck in the mud” hypothesis (Zarsky, 1997). Downward pressures on standards in the OECD may be kept in check by popular demands to protect environmental health. In addition, firms may develop “win-win” production techniques which enhance both environmental protection and competitiveness; and they may diffuse good environmental practice via the pollution halo effect described above, causing an upward convergence in standards. For these reasons, standards may not drop, at least not precipitously.

However, by creating a “prisoner’s dilemma” neo-liberal global economic integration constrains the rate of improvement in environmental standards. States are reluctant to take big unilateral leaps towards better environmental management because they could be priced out of international markets and investment. Rather, they will make only incremental improvements in environmental norms that are broadly in line with primary trade and investment partners. The setting of environmental standards, at least those which directly impact on international trade and investment, is thus a collective action problem. Without collective action, environmental standards may not race to the bottom, but they will certainly not “race to the top.” Instead, they will be “stuck in the mud”.

(c) Macro Linkages

Much of the statistical and business literature on FDI-environment linkages focuses on micro issues, especially firm-level location decisions and management practices. Indeed, many studies take a very micro-ecological approach to micro-economic issues and explore “environmental impact” in terms of only one pollutant (see below). The environmental literature, however, tends to focus on policy impacts, as well as on the broad macro-ecological-economic impacts of FDI. There are at least six potential pathways by which FDI can influence macro environmental variables.

The first, and of greatest concern to environmentalists, is the scale impact of FDI. Foreign firms are typically larger than domestic firms; in some cases, such as petroleum exploration and drilling, only foreign firms have the requisite production capabilities to invest in a particular sector. Even if foreign firms embrace “best practice”, the overall quantity of pollution and level of resource degradation increases with a greater level of investment. In addition to pollution, a large increase in the scale of investment -- in the absence of a broader “sustainable development” framework -- is likely to undermine biodiversity and degrade common access resources such as rivers and coastlines. Most environmental impact assessments consider only the micro-impacts of particular investment projects and not the macro-impacts of the project or of the sum total of like projects. The widespread devastation of the Amazon region by oil exploration and drilling projects is a good example.

Indirect impact on income is the second broad macro FDI-environment linkage. The contribution to GDP growth, both static but especially dynamic growth, is typically cited by economists as an important rationale for openness to FDI. On the positive side, increases in income, especially if equitably

distributed, will increase living standards -- one of the objectives of “sustainable development”. Achieving “take-off,” that is, getting on a dynamic path to industrialisation may make possible sustained improvements in living standards. Industrialisation, in turn, may reduce social and economic pressures on natural resources. Moreover, increases in income may increase public (and private) funds for environmental protection and restoration by governments, businesses, communities and consumers.

On the negative side, in the absence of effective “sustainable development” planning and regulatory frameworks, increases in income will exacerbate the ecological scale impacts described above. An improvement in sanitation, for example, may be counterbalanced by a much larger fleet of cars, with accompanying air and atmospheric pollution and traffic congestion. The reduction in the use of agrochemicals may be counterbalanced by the expansion of unsustainable monoculture cropping patterns, with resultant losses of habitat and soil productivity.

Environmentalists’ concern about the scale of ecological degradation is not limited to the impacts of FDI. Rather, it encompasses patterns of unsustainable economic growth in general, whether financed by domestic or foreign investors and whether in the OECD or in developing countries. Indeed, there is a widespread sense in environmental circles that the fundamental issue for global sustainability is the need to reconfigure consumption patterns in “the north” while enhancing living conditions in “the south” to achieve north-south equity (Sachs *et al.*, 1998; Athanasiou, 1997). While they may bring or undertake incremental improvements in local environmental performance, foreign firms enhance and sometimes even are the primary transmission belt for the broadly unsustainable production and consumption patterns of OECD countries.

A third macro linkage is the impact of FDI on the local tax base. Through transfer pricing and other mechanisms, foreign firms are often able to avoid local taxes, reducing monies for public goods. Environmental public goods include waste and water management infrastructure, habitat conservation, and environmental education. Moreover, competition for FDI in a global economy puts a drag on the ability of local governments to raise tax rates.

A fourth macro linkage can be categorised broadly as political economy impacts. Foreign firms often wield significant political influence in developing countries (and at home). In terms of environmental impacts, such influence could be used to promote or inhibit environmental planning and regulation by local governments, as well as to promote or inhibit community involvement in environmental monitoring and policy formation. Policy areas with strong environmental impacts include how property rights are defined and whether citizens enjoy civil and political rights. Where linked with military dictatorships, large FDI projects can impose large, even brutal, environmental and social impacts.

Fifth, FDI has socio-environmental impacts on workers, local communities, and indigenous cultures. For workers, health and safety impacts are the most pressing, as well as wages and working conditions. Health, safety and access to resources such as water are also important to local communities. Foreign firms may, or may not, implement higher occupational health and safety standards than domestic firms, or may be pressed by governments and NGOs at home to raise their standards. Indeed, a broad range of human rights, including the right to community participation in environmental monitoring and policy making, are part and parcel of FDI-environment linkages. Given the fact that the culture of most indigenous groups is closely bound up with nature, the protection or violation of indigenous rights and cultures forms one of the most direct aspects of the linkages between human rights and environment. Foreign firms have often been the vehicle by which resource exploitation has intruded upon indigenous societies.

Sixth, FDI may generate cross-border pollution and/or resource degradation, generating international friction and/or potentially stimulating international co-operation in environmental management. These “environmental security” linkages are not restricted to the activity of foreign firms. However, with foreign firms, the issue of which government has jurisdiction over what is often unclear, necessitating international diplomacy to develop regimes to manage common resources.

3. FDI and the Environment: The Evidence

At a conceptual level, the potential impacts of FDI on the environment encompass a wide range of tangled and contradictory direct and indirect effects. Empirical work is important in answering the overarching question at stake in the debate, *viz.*, what kinds of rules/norms should govern FDI and, more broadly, investment in order to maximise the positive impacts? This section reviews and evaluates some of the most recent and most seminal empirical evidence.⁹

Most research efforts have focused broadly on one of two objectives, *viz.*, to determine quantitatively whether a particular hypothesised FDI-environment relationship is significant in the aggregate; and/or to identify the range of potential impacts by examining particular investment projects, industry sectors, or countries. The primary kinds of empirical evidence are thus statistical and case studies.

Statistical studies search for patterns at a high level of aggregation and test narrowly defined hypotheses. The statistical studies reviewed here focus on two micro-linkage issues: 1) whether and how environmental regulation influences industry location; and 2) what determines firm level environmental performance. The strength of the statistical approach is that it can shed light on general trends, thus affirming or rejecting the broadest hypotheses and steering policy innovation towards the broadest concerns rather than more isolated cases.

The weakness is two-fold. First, it requires that questions be narrowly specified, skewing statistical studies -- and thus policy -- towards micro rather than macro linkages. Within the micro category, statistical studies typically test extremely narrow questions, *e.g.* considering only one pollutant to represent the entire universe of “environmental impacts.” Second, even if questions are properly specified, the ecological data are simply not available. Researchers must thus either exclude key variables or utilise various kinds of proxy variables that, in the view of ecologists, miss the mark. The marriage of statistics with ecological science is often not very fertile.

There are also strengths and weaknesses in the case study approach. The greatest weakness stems from the fact that single case studies may or may not reflect trend. Environmental advocates often focus, of necessity, on the worst cases of environmental abuse by foreign companies. Whether such cases are outliers or reflect a pattern is not immediately clear. The strength of the case study approach is that it allows for the inclusion of a much wider and nuanced information set: both micro and macro questions can be explored and a wider variety of both qualitative and quantitative evidence brought to bear. Moreover, with enough case studies, broad patterns and trends can be discerned and local/regional and industry specific issues can be separated from global trends.

(a) Statistical Studies: Pollution Havens and Halos

The statistical evidence reviewed here focuses on first, whether environmental regulation influences firm location decisions, that is, the industrial flight/pollution haven hypothesis (Anderson *et*

al., 1997; Eskeland and Harrison, 1997; Xing and Kolstad, 1997); and second, whether the fact of foreign ownership or financing affects environmental performance in developing or transitional economies (Hettige *et al.*, 1996; Eskeland and Harrison, 1997; Aden *et al.*, 1998; Blackman and Wu, 1998; Dasgupta *et al.*, 1998). A number of studies also explore determinants of environmental performance without differentiating between foreign and domestic firms (Afsah *et al.*, 1996; Dasgupta *et al.*, 1997; Pargal and Wheeler, 1996). Together, the two sets of performance-oriented studies shed light on whether environmental standards are rising in developing countries despite the lack of effective formal regulation.

The aim of this review is less to be comprehensive, since other studies have already accomplished that (Jaffe *et al.*, 1995; Adams, 1997; OECD, 1997). Rather the purpose here is to focus on more recent studies and to explore some fresh insights.

Industrial Flight/Pollution Haven

The pollution haven hypothesis has been around long enough to generate a significant body of statistical evidence, the lion's share of which has found no significant relationship between environmental standards and industry location decisions (Jaffe *et al.*, 1995). The studies typically use sector or industry level investment data to assess whether the proportion of foreign investment is greater for "dirty", *i.e.* the industries with the highest levels of emissions, than for other industries (Eskeland and Harrison, 1997). Most studies have found that it is not and have concluded that there is no evidence to support the "pollution haven" hypothesis.

The explanation usually put forward is that abatement costs are too small a fraction of total production costs to matter to location decisions. Given that the hypothesis rests on differential costs of complying with environmental regulation, the inability of macro level data to reveal a pattern of industrial flight suggests either that abatement costs are not very high in developed countries, that the abatement cost differential between developed and developing countries is not very great, or both.

A study of pollution abatement capital expenditures (PACE) for US industries in the early 1990s found that, for most industries, PACE was less than 5 per cent of total capital expenditures (Jaffe *et al.*, 1995, p. 141). Even for most of the dirtiest industries -- paper, chemicals, and primary metals -- PACE was less than 14 per cent. Only for the petroleum and coal sector was PACE significant: about 25 per cent of total capital expenditure (but still less than 2 per cent of the annual value of shipments).

Only one study found a "strong confirmation" of the theoretical prediction of the pollution haven hypothesis (Xing and Kolstad, 1997). The study asked the question: "Do lax environmental regulations attract foreign investment?" Because it is not possible to directly observe laxity, the researchers utilised an observable variable, aggregate national sulphur emissions, as a proxy. They found that pollution-intensive industries from the US were strongly attracted to countries where environmental regulation was lax (*i.e.* where national sulphur emissions were high). There was no effect on less polluting industries.

While interesting, the Xing and Kolstad study reveals the weakness of the statistical approach. The use of aggregate national sulphur emissions as a proxy muddies cause and effect: higher emissions are as likely to be the effect as the cause of FDI. Indeed, the authors themselves conclude that they had not provided "convincing evidence that the environmental variable dominates other determinants in the process of determining FDI of a polluting industry" (p. 21). On the other hand, the other statistical studies showing no correlation at all also tend to specify variables narrowly -- and draw conclusions broadly. One is left with the nagging suspicion that they have not asked the right questions.

A recent World Bank study, for example, confidently and unambiguously rejects the pollution haven hypothesis and the ethical questions it raises (Eskeland and Harrison, 1997). “Political and ethical questions about environmental quality can hardly be of great importance if the migration south of polluting industries is not of significant quantitative importance” (p. 4).

The study examines FDI in four developing countries and found no significant positive correlation between measures of air and water emissions and FDI. However, the results require excluding data that make the association positive for air pollution -- the case of French investment in the cement industry in Morocco. The authors justify the exclusion because the cement is not exported back to France, suggesting that laxer environmental standards were therefore not the likely incentive to invest in Morocco. While the study has a neat conclusion, one is left wondering what is really happening in Morocco, how many other Moroccos are out there, and whether such studies obscure more than they illuminate.

An interesting twist on the pollution haven hypothesis is explored by Anderson *et al.* (1997). They suggest that the statistical studies to date may have misspecified the determining variable. Rather than abatement costs, the key variable for business is the total cost of complying with environmental regulation, including both abatement and transactions costs. They argue that the costs of environmental compliance are higher in the US than other OECD countries because of “adversarial legalism”. They set out to prove, not altogether successfully, that the higher transactions cost of doing business in the US stimulated investment in Europe by US mining companies in the 1980s and 1990s.

One interpretation of the lack of statistical support for the industrial migration hypothesis is that, despite the gap in standards between developed and developing countries, environmental regulation is universally “too low” (Zarsky, 1997). Even if the gap between OECD and developing countries is large, the total environmental spending by OECD firms, apparently, is too small to matter. Given the continuing problems of industrial pollution in the OECD area, this must mean that industry as a whole is not internalising environmental costs. Rather than agglomerating in havens, a more likely global pollution pattern as countries industrialise, barring collective action to significantly raise norms, is for pollution to become globalised.

Environmental Performance – Pollution Halo?

One of the key questions about FDI and environment is whether foreign direct investment brings significant improvements in environmental performance in developing countries. The “pollution halo” hypothesis suggests that superior technology and management, as well as demands by “green consumers” at home, make OECD firms the vehicles for better performance. Learning and copying effects by domestic firms might also lift industry standards overall.

The primary statistical work on this issue has been undertaken by the “New Ideas in Pollution Regulation” group at the World Bank. The group has focused on the question. “What determines firm-level environmental performance ?” The question is especially salient in developing countries, which lack effective and enforced regulatory structures. However, the fundamental insight that side-by-side firms perform differently even when regulation is in place has generated interesting insights in developed countries as well (Laplante and Rilstone, 1995; Dion *et al.*, 1997).

Evidence in support of the pollution halo hypothesis is provided by Eskeland and Harrison (1997). Using energy use per unit of output as a proxy for energy emissions, they found that foreign ownership was associated with cleaner and lower levels of energy use in the three countries of their sample (Mexico, Venezuela, Cote d’Ivoire). A study by Blackman and Wu (1998) also found

significant support for the conclusion that foreign investment in electricity generation in China increased energy efficiency and reduced emissions. The primary reason is that FDI is focused on advanced generating technologies. Better management and the introduction of competition are also part of the halo effect.

A number of other studies, however, found no significant effect of foreign ownership or financing. In a study of Mexican manufacturing firms, Dasgupta *et al.* (1998) found that “OECD influence” did not affect the degree of “environmental effort” by firms. The degree of effort was measured by two variables: the adoption of ISO 14 000 type procedures and the use of plant personnel for environmental inspection and control. Using survey methodology, the researchers found that new technology was not significantly cleaner and there was no evidence that plants with new equipment had better environmental performance.

What did matter to environmental performance in Mexico was the size of the plant and multi-plant status (larger size and multi-plant firms were positively correlated with more effort), recent experience of regulatory pressure (inspections), and public scrutiny. For company compliance with its own internal environmental guidelines, the most important variable is strong regulation. The foreign connection in general was not significant. “We do not find,” they conclude, “a significant role for any OECD linkage: multinational ownership, trade, management training, or management experience” (p. 18).

Three other studies in Asia, summarised in Hettige *et al.* (1996), also found foreign ownership, financing, or links to OECD markets to be insignificant in firm-level environmental performance. Huq and Wheeler (1993) examined fertiliser and pulping plants in Bangladesh; Hartman *et al.* (1995) examined determinants of pollution abatement among 26 pulp and paper plants in Bangladesh, India, Indonesia and Thailand; and Pargal and Wheeler (1996) conducted an econometric analysis of determinants of performance among plants across a number of sectors in Indonesia.

Like the Mexican study, these studies in Asia found that the scale of the plant or firm was positively associated with environmental performance, *i.e.* the bigger the better. They also found that “rapidly spreading multinational facilities are relatively clean” because they employ newer technology (p. 1901). The most important factor, however, was not ownership (*i.e.* domestic vs. foreign), but the newness of the facilities: new plants, whether domestic or foreign owned, are likely to be cleaner because of newer technology. This suggests that it is the “new investment” rather than the “acquisitions” aspect of FDI which is likely to bring benefits. In a surprising twist, a recent study of manufacturing plants in Korea by Aden *et al.* (1998) found that domestic firms apparently perform better than foreign firms. The variable examined was plant level spending on pollution abatement. The authors speculate that the reason that domestic firms spend more might stem from the attempt by the unpopular Korean chaebol to shield themselves from public criticism.

All these studies suggest that, despite the lack of effective regulation, environmental performance of many firms is improving. Rather than pollution-intensive production across the board, Hettige *et al.* (1996) conclude that “Despite weak or non-existent formal regulation and enforcement, there are many clean plants in the developing countries of South and Southeast Asia” (p. 1891). What accounts for this? While scale and technology effects are important, what emerges from these studies (as well as the Mexican study) as the most significant determinant of firm performance is community pressure.

The actual mechanisms by which communities pressure firms to clean up are not clearly spelled out in these studies (with the exception of Korea, where communities have signed formal agreements with companies). Instead, what the studies show is a high correlation between the income and/or education

level of a particular community and the overall level of environmental performance by firms located in that community. This result is strong in Indonesia and Thailand, in China (Afsah *et al.*, 1996), and in South Asia. Apparently, richer and more educated communities are able to attract good plant managers and/or to bargain effectively with firms. Poorer and less educated communities are not.

In addition to community pressure, the Mexican and Korean studies suggest that strong regulation matters. Firms adjust their effort and their performance based on expectations of enforcement, especially site inspection visits and sanctions. In Korea, regulators developed an increasingly intrusive monitoring program with escalating sanctions depending on past performance.

Case Studies: Performance, Standards -- and More

Detailed case studies of FDI and environment linkages are relatively scarce. The most recent in-depth studies are found in Gentry (1998) and Earth Council (1998). Gentry presents studies of FDI in the agricultural sector in Costa Rica (bananas) and Brazil (soybeans and pulp and paper); and in the manufacturing sector in Costa Rica and Mexico. The Earth Council studies examine a number of environmental and human rights conflicts involving FDI, including in the “growth triangle” in Indonesia (Sari, 1998); offshore oil drilling in the Russian Far East (Rosenthal and Mischenko, 1998); and gold mining in Suriname (MacKay, 1998).

The five case studies edited by Gentry focus on examining whether and why foreign firms are making incremental improvements in environmental performance. The three agricultural case studies examine monocrops with a high proportion of exports and foreign investment, as well as environmental impact. Negative impacts include soil erosion, water pollution, chemical use, loss of habitat and biodiversity, and waste. Basing himself primarily on the Costa Rican experience with bananas, Gentry concludes that the FDI-environment linkage is generally positive: “Led by multinational companies, improvements in environmental performance are being made as a result of pressure from export customers, efforts to reduce production costs and some government programs” (p. 61). The role of government, however, is not as in traditional forms of regulation, but in the integration of environmental considerations into programs which aim to attract investment and trade.

Pressure from export customers has been crucial in the Costa Rican banana case. Two NGOs, the Rainforest Alliance and AMBIO foundation, have joined forces in creating an “Eco-OK” certification program. To be certified, companies must be inspected and evaluated on five criteria: 1) handling of hazardous substances; 2) waste management; 3) occupational health; 4) drinking and waste water quality; and 5) reforestation programs (Gentry, 1998, p. 63). There is evidence that some Costa Rican producers, especially the larger, multinational companies, are reducing the chemical intensity of banana production. Since it is difficult to identify positive environmental impacts, the study bases its conclusions on the fact that banana producers in Costa Rica use less fertiliser and irrigation than other crops, and have higher productivity than other producers in other countries.

Despite Gentry’s unequivocal assessment, the other two agricultural case studies are in fact ambiguous in detailing incremental positive links between FDI and the environment. In the case of the Brazil pulp and paper industry, some improvements may have been made, including the fact that the government now requires rigorous Environmental Impact Assessment of new projects. However, monitoring is still poor. In terms of self-regulation, the industry is working with the national standards agency and the Forest Stewardship Council to develop a national certification system. However, only one firm to date has taken a proactive stance and achieved ISO 14 000 certification.

In the case of the soybean industry in Brazil, foreign firms are not very active in production but are very involved in processing and marketing and could potentially be influenced by export customers. To date, however, they have not felt much influence. The Brazilian government is planning a huge expansion of 50 million additional hectares of soybean production. According to the case study author, the “environmental impacts [of the expansion]...particularly in the Amazon region, have not yet been sufficiently evaluated” (p. 80). An environmental problem in agro-industry in general is the standardisation of agricultural products and the accompanying loss of crop genetic diversity.

The key issue in these three case studies, however, is not whether multinationals are incrementally improving performance. Even granting that Gentry’s optimistic assessment on this score is warranted, the heart of the matter is that monocultural cropping patterns as a whole are unsustainable. At an eco-system level, the scale of banana production -- including the scale of agro-chemical use -- suggests that no amount of Eco-OK bananas will set Costa Rica or the world as a whole on the path to sustainable agriculture. “Chiquita has made some improvements in recent years”, acknowledges Catherina Wesseling of the Pesticide Program of the National University of Costa Rica, “but the intensive cultivation of bananas, has never been -- and probably never will be -- done on a sustainable basis” (quoted in Wheat, 1996, p. 14). Many environmentalists, like biologist Gabriel Rivas Ducca of the Costa Rican Ecological Association in San Jose, argue that green seals should be reserved for bananas produced on a small-scale sustainable basis (Wheat, 1996).

The two manufacturing sector studies in Gentry (1998), which focus on Costa Rica and Mexico, shed light on the role of government regulation and the “race to the bottom” hypothesis. In Costa Rica, the government has actively pursued foreign investment via the Free Zone Law. In 1995, 183 companies operated under the free zone system, up from 11 in 1986. The case study suggests that, in the pursuit of particular investment projects, the government “skipped...legal requirements, including environmental norms and rules” (p. 130).

Indeed, the Free Zone Law does not include clear environmental requirements for companies coming to Costa Rica, there is no enforcement of the laws governing companies in the free zones, the legal framework is confusing and incomplete, and people working for governmental investment-attraction agencies do not know about environmental laws and norms (pp. 131-132). Of the 183 companies in the free zones, only two (both subsidiaries of US companies) have formal environmental programs.

Hence, the central insight from the Costa Rican case study is that the government is highly sensitive to competition for foreign investment; and that this sensitivity is putting a drag on the enforcement of environmental regulation. The case study lends support to the “stuck in the mud” hypothesis about the relationship between FDI and environmental standards.

The Mexican case study, by contrast, paints a picture of increasing environmental regulation and enforcement, without the flight of foreign investors. Based on a survey of environmental managers in manufacturing firms, mostly large, US-based firms, the study found that companies are making significant environmental investments, especially in water treatment. The investments, financed primarily by local operations, were motivated by government regulations and inspections, followed by corporate policy, cost savings, and ethical standards.

The Mexican case study concludes that foreign companies were at least as responsible towards the environment and as sensitive to local regulation as Mexican companies. It also concludes that “the lessons of Mexico suggest that Third World countries can increase the strictness of their environmental regulation and enforcement without fear that foreign direct investment will flee” (p. 116).

The three Earth Council studies take a more anthropological approach in mapping the linkages between FDI and the environment.¹⁰ The primary focus of the case studies is the interface between foreign companies and local communities. In each study, a foreign investment project is the object of considerable community opposition or concern on environmental grounds, both micro and macro. Human/indigenous rights featured prominently.

In each case, the studies found that the internal procedures of foreign companies to assess, monitor and/or mitigate environmental degradation in advance were inadequate or non-existent. In two of the cases, Indonesia and Suriname, the companies responded to local community pressure and moved towards improved environmental performance in the face of local criticism. In the Sakhalin case, the companies undertook an environmental impact assessment of large-scale offshore oil drilling only when they were pressed externally, primarily by multilateral finance agencies. In fact, the oil companies have actively undermined local environmental laws and are now the target of a lawsuit testing the environmental provisions of Russia's new constitution.

In the other two cases, response to community pressure was inadequate in the view of some of the key protagonists in the conflict. In the Suriname case, the proposed project, which involves two Canadian gold mining companies, requires the relocation of an indigenous Maroon community. A significant part of the community, however, does not want to move. After confrontations and a number of attempts at mediation, the companies offered to pay some compensation. The dispute, however, was over rights to land. Neither the companies nor the Suriname government, which does not recognise tribal land rights, were willing to redesign the project or to consider the validity of the right of indigenous people to say no to the mining project. International pressure, spearheaded by the Forest Peoples Programme of the World Rainforest Project, has been important in bringing pressure on both the government and the companies.

The Indonesian case study involves the Batam Island export oriented trade and investment zone in the "growth triangle" of Indonesia, Singapore and Malaysia. Sari (1998) found that local community pressure was effective in forcing the clean-up of toxic and hazardous wastes in the Batu Ampar industrial zone. However, there were no effective institutional mechanisms by which communities could raise concerns about the development process on the Island as a whole, which threatens to severely undermine both biological diversity and human health.

Besides community pressure as a determinant of environmental performance, the Sakhalin case, which involves consortiums of US, Japanese, and European companies, examines two other kinds of FDI-environment linkage. The first is political economy. The study suggests that the oil companies are active in influencing the development and enforcement of environmental law in Russia. The second is contribution to the local economy: the Production Sharing Agreements (PSA) between the oil companies and the Russian government have the lowest royalty rate of any PSA in the world.

The Earth Council case studies confirm what the Gentry studies found, *viz.*, community and external pressure can press multinationals to improve their environmental performance, but only incrementally. The large macro issues -- the ecological scale impacts of FDI, the political economy effects of foreign investors, and the socio-environmental impacts of investment projects in countries with weak or non-existent legal protections -- remain outside the grasp of individual community or NGO campaigns.

In addition to the detailed case studies, a number of FDI projects have also been targeted by NGOs and others for intensive study and criticism. A sample of some of the most high-profile cases include:¹¹

- oil exploration and drilling in the Amazon (Kane, 1995; Project Underground, 1998a) and in Nigeria (Sierra Club, 1999);
- the construction of a natural gas pipeline in Burma (International Rivers Network, 1999) and in Thailand (Knight, 1998);
- the Grasberg Gold Mine operated by Freeport MacMoran Copper and Gold Company in Indonesia (Project Underground, 1998b);
- manufacturing sector FDI in the *maquiladoras* along the US-Mexican border and more broadly, within the NAFTA context (Public Citizen, 1999);
- FDI in the exploitation of forest timber resources, especially in Southeast Asia and the South Pacific, and the role of eco-labelling of forest products (Dixit, 1995; Nigel and Sullivan, 1995).

A number of themes run through the NGO literature. First, foreign companies are often the sole or primary source of particular kinds of investment in particular countries. In Burma and Nigeria, for example, foreign oil companies are the sole source of investment in the exploration and drilling of oil and natural gas. In the Amazon, foreign companies are the primary source of oil investment. In the South Pacific, foreign companies are the sole investors in rain forest exploitation. In Indonesia, only a foreign company or consortium could take on the scale of the Grasberg Mine.

The key issue, therefore, is not how foreign companies compare with domestic companies, but rather, how they perform in absolute terms in particular contexts. While some of the statistical studies have found benefits to scale of FDI, some of the case studies suggest that environmental impacts of scale, especially in extractive industries, can be highly negative.

Second, the index by which NGOs evaluate multinationals involves not a single or narrow set of environmental indicators, but a broad range of both micro and macro criteria. These include local emissions/pollution, human/indigenous rights, contribution to the local economy, and political-economic relationship to the government. Typically, the cases which develop into international campaigns are those where the behaviour of the foreign firm is found wanting on several, if not all, counts.

The California-based Unocal oil company, for example, the target of the Free Burma campaign, is criticised not only because its proposed gas pipeline will destroy pristine rain forest, but because it is actively supporting a repressive military regime. Unocal's performance is perceived to be egregiously bad: several other oil companies, Arco, Amoco, and Petro-Canada, as well as some apparel companies, have already withdrawn their operations from Burma. Likewise in the Amazon, where oil drilling and exploration have created an ecological catastrophe in some places, international concern has been heightened by the devastating impacts of oil development on local indigenous cultures and communities. In Colombia, for example, the U'wa people have suffered human rights abuses and have threatened to commit suicide in the face of pressure to lease their ancestral lands to Occidental Petroleum ("U'Wa Tribe Stalls Colombia's Rush for Oil," *San Francisco Chronicle*, March 30, 1998). While the statistical studies spotlight narrow indicators of performance, the case studies tug analysis towards a wider set of FDI linkages and impacts.

Third, the NGO literature suggests an ambiguous relationship between environmental standards and FDI and, more broadly, globalisation. In some cases, a relationship to foreign export markets has brought “green consumer” pressures to bear on foreign and domestic companies alike. Via eco-labelling, OECD consumers can discriminate between products produced under more versus less environmentally benign processes. The “eco-banana” and the certification by the Forest Stewardship Council of sustainably produced rain forest timbers are the clearest examples. Eco-labelling may thus push standards up.¹²

In the NAFTA context, on the other hand, economic integration might be causing standards to be “stuck in the mud” or even to slide down. Out of seven challenges using NAFTA’s provisions giving private investors the right to sue governments, six involve claims by US corporations on federal or state-level environmental measures in Canada and Mexico. The best known is the successful claim of the Ethyl Corporation against Canada. As a result of a Canadian Internal Trade Agreement panel ruling that went against the federal government with respect to limits to interprovincial trade in the fuel additive MMT, the Canadian government rescinded such limits and paid US\$13 million to the Ethyl Corporation in return for the company terminating its legal actions under NAFTA.

(b) *Reflections On the Evidence*

As a whole, the statistical and case study evidence suggests a number of conclusions can be made about FDI-environment linkages. First, differences in environmental standards and/or abatement costs have apparently not made a significant difference to firm location decisions. Second, firms, both domestic and foreign, are incrementally improving their environmental performance in many parts of the world, primarily in response to effective national regulation and/or local community pressure. Hence, there is little evidence of either a “pollution haven” or a “race to the bottom.”

There is also little evidence that foreign firms consistently perform better in developing countries, especially once the firms’ size is taken into account. In some sectors, notably energy, foreign firms are likely to have superior technology, or close links to “green consumer” markets. In the main, however, foreign links, including export markets and ownership of plant, seem to make little difference to firm performance.

The case studies paint a more muddy picture. There are cases of egregious local and even national ecological degradation. While some firms may not have been drawn in by lower standards, they clearly perform like environmental renegades once they get there. In addition, there is evidence that policy makers are sensitive to potential effects of higher environmental standards on foreign investors. They may not weaken standards, but they do not enforce them either.

On the other hand, there are cases where foreign firms have brought with them higher standards and better management practices, as well as better technology, and cases where foreign firms were the first to respond to consumer pressure for a “greener” product or production process. These improvements, however, have been incremental and have not addressed larger ecological impacts. “Halos” exist but, to date at least, they are apparently quite small.

4. What Rules for FDI? Conclusions and Directions

The central issue at stake in examining FDI-environment linkages is to determine how best to govern international investment in order to maximise positive environmental impacts. This concern fits within the broader goal of creating investment rules which reduce the negative impacts of competition for

FDI and maximally enhance prospects for beneficial economic development (Moran, 1999). Within such an institutional framework, an increase of capital flows from North to South would work to promote sustainable development. The analytical, statistical, case study and NGO evidence presented in this paper can be synthesised into a number of conclusions.

First, the mix of demonstrated positive, negative and neutral effects of foreign direct investment mitigates against any overarching conclusion about its effects “on average.” There is no average, performance is context-dependent and other things are far more important than ownership. If the goal is improvement in industry environmental performance, at both micro and macro levels, then what is needed are traditional and non-traditional (community-based) forms of regulation.

Second, a concern to be attractive to foreign investors in a highly competitive global economy has kept a lid on local/national standards or enforcement of standards. While there has not been a universal “race to the bottom,” increased globalisation -- lacking a global regulatory framework -- has inhibited a “race to the top” and caused environmental commitments to be “stuck in the mud.”

Third, while “pollution havens” cannot be proven, a pattern of agglomeration of pollution is discernible; one based not on differences in national environmental standards, but on differences in income and/or education of local communities. They may not be “havens”, but there are clearly “pollution zones” of poorer people, both within and across countries, where firms perform worse and where regulation is less effective.¹³

Fourth, the quality of the evidence, both statistical and case study, is poor compared to the research needs. In terms of location decisions, most of the statistical studies rely on very aggregated data about “industry choices” which shed little light on firms or production stages. In terms of environmental performance, the statistical studies utilise very narrow and partial indicators, or use proxies for data that are simply not available. The case studies suffer from data problems as well, including the lack of ecological performance indicators and the lack of analytical frameworks to link macro and micro ecological impacts.

Finally, there is a great gulf between what the statistical studies demonstrate and the issues at stake in the debate. Sifting through the evidence thus feels like searching for a small meat ball in a large bowl of spaghetti. In general, the gulf can be characterised as a “micro-macro” problem and reveals the different environmental paradigms at play. Based on a “pollution prevention” paradigm, the statistical and some of the case studies utilise very narrow and partial measures of environmental performance; often, just one particular pollutant. Environmentalists, however, are concerned not only about pollution, but the “environmental management” of eco-systems as a whole, and more broadly about the “sustainable development” of societies.

There is a large gap between even the best of the incremental improvements in company performance and the scale of ecological impact caused by broadly unsustainable production and consumption patterns at the global level. The wealth of northern consumers might help make products marginally “greener,” but it also creates a heavy burden on the earth. It is in this sense that the claim that foreign direct investment is “bad” for the environment has credibility.

How, then, to enlarge the environmental benefits of FDI? First, it is clear that regulation matters. While local and national regulation can be effective, there is a great need for an *overarching global framework* to heighten investor environmental responsibilities. Only by setting common rules and expectations for all foreign investors will policymakers escape the “stuck in the mud” conundrum.

Located within a set of global or regional rules governing investment, environmental norms should include both micro level investor responsibilities and macro level sustainability objectives.

Global rules would include “process” issues, such as the requirement for environmental impact assessment and mitigation, as well as “substance” issues, such as adherence to a set of international “baseline” environmental standards, perhaps on a sectoral level. Standards could build on the World Bank’s environmental policies and guidelines, which both governments and private investors already use as a point of reference. According to French (1998), effective international standards should be minimum standards which countries and companies can exceed if they wish; and they must be set high enough to have a real impact. The development of such standards should include widespread consultation among developed and developing countries, as well as environmental and other NGOs. While the aim is to achieve a high level of consensus, there will also likely need to be a bargaining process between richer and poorer countries.

Second, it is important to build national-level governance capacities of two kinds. First, governments need to establish their *broad development objectives*, including social, environmental, and economic goals, and the role of FDI within them. To ensure that they are congruent with development objectives, investment projects should be subject to preliminary “strategic environmental assessment”. Second, governments need to develop capacities for the effective *environmental regulation of all industry*, whether domestic or foreign in ownership. Local regulators could benchmark to relevant global (or regional) standards, as well as regulate locale-specific environmental impacts. The enforcement of environmental regulation could take the form of “command and control”, market-based economic instruments, and an enhanced community role in monitoring via public disclosure, as well as participation in industry and development planning.

Third, there is an urgent need to promote innovations in *corporate governance* which directly enhance corporate social and environmental accountability. Many transnational corporations have adopted “codes of conduct”, ISO 14,001 or other forms of voluntary self-regulation. Few codes, however, have any internal or external compliance mechanisms (Kolk *et al.*, 1999). Increasing the likelihood of compliance requires at the least that companies measure environmental impacts and disclose information to regulators, impacted communities and the public. Useful internal governance tools might include environmental auditing and reporting, environmental management systems and independent certification. Useful external governance tools might include mandatory information disclosure and third-party certification.

A good starting point is the creation of Pollutant Release and Transfer Registers (PRTR). Modelled on the US Toxic Release Inventory, PRTRs require companies to track and report emissions. Such information can be used by communities to monitor companies, enhancing community bargaining power. A PRTR now being established for the three NAFTA signatories will require public disclosure of facility-specific and chemical-specific emissions on both sides of the border. According to Michael Gregory of the Arizona Toxics Information, “Disclosure allows comparisons. Without it, we can’t pressure the bad polluters and praise the companies that run relatively clean shops” (quoted in Planet, 1998).

Fourth, governments need to invest more resources in developing *ecological metrics and data*, and making such data available to the public. To enhance the potential environmental benefits of FDI, environmental regulation, whether global or national, needs to be “performance-driven.” Regulators, company managers, local communities, and the general public need first to know what the environmental impacts are, both at micro and macro levels, and how to quantify them. Developing common metrics

would help company managers, consumers and policymakers alike to determine and promote “best practice”.

Beyond reducing plant-level pollution, FDI must fit into a larger framework of sustainable development. Performance indicators should include measures of eco-system health. Consistent and comparable information of such macro-variables is needed both for scientific reasons, *i.e.* to determine what the impacts are and how they respond to different policies; and for political reasons, *i.e.* to build support for broad regulatory frameworks. It is only within the context of such institutional frameworks, both nationally and globally, that FDI can indeed be transformed into a vehicle to promote sustainable development.

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NOTES

- 1 All international capital flows data from World Bank (1997), Tables 5.2 and 6.10.
- 2 Eleven countries received nearly 80 percent of all FDI flows to developing countries between 1990-1995. In descending order of magnitude, they were China, Mexico, Malaysia, Brazil, Hungary, Indonesia, Poland, Czech Republic, Colombia, Thailand, and Russia.
- 3 The belief in the benefits of a market-driven, outward orientation was so prevalent in the 1990s among policymakers and academics that it was dubbed “the Washington consensus”. In the wake of the financial crisis, critics of neo-liberalism have gained greater voice (see Rodrik, 1999).
- 4 The neo-liberal approach to global economic governance, embodied in the GATT/WTO, is based on the principles of most favored nation and national treatment, with an associated dispute resolution procedure. The term “neo-liberal” does not suggest antipathy to national regulation but rather the absence of social and environmental principles in an overarching, international institutional framework governing the global economy.
- 5 See OECD (1997).
- 6 According to U.S. data, industries with high levels of abatement costs are paper, chemicals, petroleum and coal, and primary metal industries. See Table 6 in Jaffe *et al.* (1995).
- 7 Thanks to Peter Dorman, Professor of Economics at Evergreen College, for this point.
- 8 In the Bhopal case, for example, the human and environmental scale of the Union Carbide disaster was greatly exacerbated by the lack of adequate emergency response mechanisms.
- 9 For a comprehensive literature review, see OECD (1997). See also Adams (1997) and Jaffe *et al.* (1995).
- 10 The Earth Council’s Environmental Ombudsman Project was directed by Lyuba Zarsky of the Nautilus Institute. Ten case studies of environment-development conflicts were commissioned, three of which are focused on foreign direct investment. See <http://www.ecouncil.ac.cr>.
- 11 NGOs have also targeted infrastructure investments involving the World Bank and private sector financial investors, most notably large hydropower dams. See McCully, 1996.
- 12 The direct and indirect environmental impacts of eco-labelling require further study. To date, studies have suggested that the impacts are sensitive to particular ways of awarding eco-labels. National programs which award labels only to national producers, for example, may certify products that are not “best in class” at a global level. See Zarsky (1994).
- 13 Evidence in the US of the clustering of toxic waste dumps and facilities by race and class can be found in Gelobter (1993) and Goldman and Fitton (1994).

THE ENVIRONMENTAL IMPLICATIONS OF FOREIGN DIRECT INVESTMENT: POLICY AND INSTITUTIONAL ISSUES

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1. Introduction

Since the beginning of the decade, private capital has surged in importance as a source of finance for emerging market economies. In 1990, it accounted for less than half of the \$44 billion in international capital that came to developing countries. In 1996, this share rose to 86%, amounting to some \$244 billion of private capital flowing to developing countries that year (French, 1998).

Almost half of the private capital inward-bound to the developing world consists of foreign direct investment (FDI). FDI can be distinguished from more volatile private capital flows, such as portfolio investment or bank lending, in that it is usually for the long term. The investing transnational corporation (TNC) aims to enhance its competitive value by entering into new markets, obtaining access to new resources, or achieving efficiency gains.

The growing importance of FDI in the global economy has engendered considerable debate among policymakers and activists concerning the implications of this trend for the environment, on the macro as well as micro levels. The “big picture” concern is that this increasing reliance on FDI and on the investing TNCs will spread the consumerism of the advanced market economies, and the accompanying excessive use of resources, to the rest of the world. This could counteract efforts to build a sustainable global economy.

On the micro level, the concern is how a particular investment will affect a host country’s environment. This depends, *inter alia*, on the industry and sector involved, the reason for the investment, and the environmental controls in place.

In certain circumstances, FDI can bring about significant environmental improvement. For example, much of the FDI that has recently flowed into Central and Eastern European (CEE) manufacturing facilities has gone into upgrading technologies and remedying past environmental damage (PED). Investors have brought capital and know-how, introduced more efficient methods of production, and demonstrated the link between good environmental practices and profitability (Goldenman, 1997). FDI has also played an important role in the financing of environmental infrastructure projects by stimulating new public-private partnerships (Gentry and Fernadez, 1998).

Other types of FDI, particularly investments into resource extraction industries such as mining and logging, have frequently led to serious and at times irreversible environmental degradation. Some of these cases have drawn international attention, *e.g.*, environmental pollution from oil exploration and

drilling in Nigeria (RAN/PU, 1998) and non-sustainable exploitation of forest timber resources in Southeast Asia (Dixit, 1995). Negative environmental impacts from FDI are more likely in countries where environmental safeguards are either absent or poorly enforced.

This paper reviews policies and institutions either already established or under discussion that could help to ensure that transnational investors act responsibly towards the environment. It focuses on the role of government in the belief that the state remains the institution best placed to set in place effective controls over activities carried out within or from its territory. At the same time, it recognises some of the limits to reliance on state action in this area, *e.g.*, when host countries lack the economic power, technical capacity or political will to set conditions with respect to a particular investment. In such instances other actors, including source countries, international financial institutions and the global civic society, also have vital roles to play.

The first part of the paper explores the role of host countries in developing and implementing coherent policies in order to ensure environmentally sound investment. In doing so, it draws on some recent Central and Eastern European (CEE) experiences in this area. The second part takes a critical look at some of the instruments available for controlling the environmental impacts of investment. These range from national plans and programmes for bringing about more sustainable development to instruments for taking decisions with regard to individual investments, including environmental impact assessment and environmental auditing. The third section considers the roles of other key stakeholders, including international financial institutions (IFIs), source countries and non-governmental organisations (NGOs), in holding investors accountable for the environmental impacts of their projects. The paper concludes with some reflections on directions for future actions to ensure that the growing influence of FDI on the economies of developing countries complements efforts to maintain environmental quality.

2. The Role of the Host Country in Ensuring Environmentally Sound Investment

Over the past decade, the global economy has experienced a number of fundamental shifts, including the collapse of centrally planned economies in Central and Eastern Europe and the former Soviet Union, and the financial crisis in the “miracle” economies of Asia. These developments have led to a fresh appreciation of the role of the state in economic development, and the benefits and limits of state action.

Today, markets and governments are seen as complementary. The state is needed to set in place the appropriate legal and institutional framework for well-functioning markets, while stable markets and long-term investment are fundamental to the effort to achieve economic development and alleviate poverty.

The amount of investment flowing into a given country is determined by a number of factors, including (1) the host country’s regulatory framework for investment, *e.g.*, trade liberalisation and/or privatisation, (2) the ease of doing business; and, most important, (3) prospects for long-term economic growth (UNCTAD, 1998).

Investors are particularly concerned that a country’s regulatory framework be predictable and applied consistently and without discrimination to all investors. This concern for a predictable legal framework extends to a country’s environmental rules. Investors polled in 1992 concerning environmental issues with respect to investments in Central and Eastern Europe (CEE) reported that they were less concerned about the stringency of environmental regulations than about incomplete or

inconsistent regulations that created uncertainties with regard to their environmental responsibilities (Klavens and Zamparutti, 1992).

It is worth noting that by far the largest recipients of FDI are the OECD Member countries. Yet there is less international concern about the environmental impacts of such FDI on the more advanced industrialised countries, because these countries already have in place the structures and rules to ensure that investors act responsibly, including toward the environment.

The role of the host country with respect to FDI and the environment is thus to provide:

- effective, predictable and transparent governance;
- measures to hold investors responsible for their environmental practices;
- controls to ensure accountability of those government officials who make decisions concerning whether to permit investments to proceed and under what conditions.

It is striking that effective government is also what makes investors feel most comfortable about making long-term investments in a country. In that sense, there is no conflict between economic development and strong environmental regulations: many countries that have sustained robust economic performance over the last three decades have also developed and enforced their environmental standards.

It is possible to analogise to the enterprise level. It is today widely accepted that good environmental management practices and performance are essential for a company's long-term financial health and profitability.

There seem to be few short cuts. Sustainable economic development requires effective governance and good management, and this includes attention to environmental protection. Moreover, there is virtually no evidence that levels of investment suffer if environmental controls are increased.

Thus effective government is one of the essential elements that needs to be in place, in order for a country to attract its share of investment. This includes adequate regulatory structures for environmental protection and their enforcement.

Given the above, a first principle for host countries should be that it is never appropriate to encourage investment by relaxing or waiving domestic health, safety or environmental measures or their enforcement (OECD, 1995). This fundamental principle has been endorsed by the OECD, and is enshrined in the environmental side agreement to the North American Free Trade Agreement.

A more difficult task is to set in place the institutions and policies at national and local level to ensure that investment contributes to a process of sustainable development aimed at achieving environmental, social and economic goals. This requires integrating environmental considerations into macro-economic policies in general, including sectors with a high environmental impact, such as transport and energy. It also entails setting in place appropriate policy framework conditions, including high environmental standards, removal of environmentally-damaging subsidies, and use of encouraging a mix of regulatory, economic and voluntary policy instruments.

A few countries have taken steps to develop investment policies that take into account potential impacts, including environmental, of various types of investment. For example, China's 1998 guidelines for foreign investment list some 200 industries in which incoming foreign investment will be encouraged

via, *inter alia*, favourable ownership rules and tax regimes (MOFTEC, 1998). The overall thrust of the guidelines -- to encourage the entry of up-to-date technologies -- could well lead to some environmental gains if they result in the closure of heavily polluting facilities. For example, investment in “coal-fired power stations adopting clean combustion technology” is favoured. Moreover, a few industries have been included in view of their environmental importance, e.g. afforestation and recycling technologies.

Efforts to bring in FDI to address specific environmental concerns are commendable. The risk is that, without an overall vision and strategy for national development, the benefits gained by FDI in the environment sector may be outweighed by the impacts of other, less environmentally friendly FDI.

The challenge is to integrate environmental and social considerations into strategies and plans for national development and to develop a framework of incentives and disincentives that will lead to a more sustainable pattern of development. In most countries, this effort is still more of an aspiration than a reality, with economic policies set with little or no involvement on the part of environmental specialists, and vice versa.

This can be the case even in those countries and regions where special efforts have been made to integrate major environmental concerns into development policies and investments. For example, all 49 International Development Association (IDA)¹ borrowers have been required to prepare National Environmental Action Plans (NEAPs) as a precondition for financial assistance (World Bank, 1996). An internal Bank review of the NEAP process found that the NEAPs had had a discernibly positive effect in just two of the six countries studied, mainly with respect to building more effective environmental protection institutions. Only a few government officials involved with Bank-financed projects in the other four countries knew about the NEAPs, and even fewer felt that it informed their work.

The experiences with the World Bank-mandated NEAPs reveal some of the difficulties in getting economic policymakers to take environmental concerns seriously. One reason put forward for the failure of the NEAPs to become integrated into the work of the governments for which they were prepared was a profound lack of co-ordination between those working on the NEAPs and officials working on economic development issues. This can be partly attributed to the fact that ministries of environment are often among the weakest institutions in the executive branch, overshadowed by more powerful ministries dealing with economic concerns. Environmental officials have difficulty making their cases for integrating environment into economic policies, while many government officials working on economic issues still believe that taking account of environmental considerations will impede development.

Six years after the launching of the Environmental Action Programme for Central and Eastern Europe (EAP), an international effort to provide an environmental policy framework for the CEE countries undergoing economic and democratic transition, a review of the programme's impact noted that its influence on transition country policies had been less than anticipated (OECD, 1999). One reason cited for this was that economics and other non-environment sectoral ministries had been insufficiently involved in the EAP's preparation.

A more recent effort by many countries is the establishment of national mechanisms to oversee the implementation of the agreements adopted at the 1992 UNCED conference in Rio de Janeiro, usually in the form of a National Council for Sustainable Development (NCSDD). Though considerable efforts have been made to ensure that these mechanisms are participatory, bringing in all affected stakeholders, it

1. Part of the World Bank Group.

is still too early to assess their effectiveness in integrating environmental issues into national economic development planning.

One of the lessons emerging from Central and Eastern Europe (CEE) is that this gap in understanding can be considerably narrowed. During the initial years of economic transition, conflicts between environmental and economic development officials were not uncommon. Environmental officials and NGOs tended to consider foreign investors either as outsiders who would bring polluting industries, or as “deep pockets” -- sources of financing for cleanup of the region’s environmental problems. Privatisation officials were reluctant to deal with environmental problems for fear this could slow down the process of economic reform and scare off investors.

Inexperience concerning how to address environmental problems in privatisation led to costly negotiating mistakes in some early CEE transactions. In some cases, investors insisted on unlimited indemnification for environmental clean-ups. In one oft-cited case, an investor built a containment facility for a hazardous waste site using stringent Western European standards, without informing authorities that this clean-up approach would cost nearly as much as the facility itself, and then insisted on full reimbursement according to the contract. Other investors backed away from pending deals out of fear of incurring liability for pre-existing environmental problems.

Recognition of the potential costs if environmental issues are not properly addressed has increased within CEECs. Most CEE and many NIS countries have developed at least some administrative and technical measures for addressing environmental problems in privatisation, and in some countries co-operation between privatisation and environmental officials has been institutionalised. In Poland and Hungary, for example, environment units have been set up within privatisation agencies. These units provide expert assistance in deciding how to deal with an enterprise’s environmental problems, including past environmental damage (PED), at the time of property transfer.

Those CEE countries that have addressed investors’ concerns about environmental problems related to a particular investment appear to have had more success in attracting FDI. Even more remarkable, CEE environmental officials and NGOs are now more comfortable about foreign investment. Indeed, a consensus has emerged that foreign direct investment has been an important element in bringing about concrete environmental improvements in the region (Goldenman, 1997).

The mostly positive experience of CEE governments in integrating environmental concerns into privatisation indicates that there is room for the state to take a strong position with respect to the environmental implications of a particular investment, and still remain attractive to outside investors. The next section looks more closely at some of the instruments that can be used towards this end.

3. Policy Instruments for Ensuring Environmentally Sound Investment

An important element in the CEE success in bringing in outside investment has been the development of stronger and more comprehensive regulatory frameworks, thereby building investor confidence. This has included a new generation of environmental legislation modelled after Western European standards, along with development of more effective structures and capacity for implementation and enforcement.

Concurrently, technical capacity for evaluating environmental problems in industry and for incorporating reasonable environmental conditions into operating permits has also developed in the CEECs. In fact, the demands of foreign direct investors for accurate information about the environmental

status of potential investments have helped to make private sector environmental consulting a growth industry in virtually all CEE countries.

The regulatory tools used to address environmental issues during CEE investment negotiations have been the same as those used in other property transactions and applications for development consent around the world: the environmental impact assessment (EIA) process, the environmental audit, and strong environmental regulatory frameworks in general. Environmental impact assessment is also a key part of the multilateral development banks' procedures for taking decisions on proposed projects (EBRD, 1996).

(a) *Environmental Impact Assessment*

The EIA is essentially a planning and decision making tool. It is not intended to stop development. Rather, it is aimed at identifying the adverse environmental and social consequences of a proposed project, so that government officials are fully informed of its potential impacts when deciding whether to grant or deny permission for the project.

Environmental impact assessment generally covers the impact on the environment *per se* of a proposed project, as well as any specific risks associated with certain types of operations, *e.g.*, accidents during transport of oil via pipeline in seismically active areas. In recent years, the concept of environmental impact assessment has expanded to also include social impacts such as disruption of land use by indigenous people or forced resettlements, especially with regard to large infrastructure projects.

For large-scale infrastructure projects and resource extraction operations, the EIA may be the best opportunity to ensure that the probable environmental impacts do not outweigh the potential benefits of a proposed project. The EIA process can encourage consideration of less environmentally harmful alternatives, or identify ways in which a project's design may be altered in order to lessen environmental impact. It can also provide important information for determining whether to place conditions on the project's operation, if development consent is forthcoming.

Though some variances are found from country to country, an essential element of the process is the preparation of a formal document. The document is usually required to describe at least the following:

- the proposed project, including information on its site, design and size;
- the main effects which the project is likely to have on the environment;
- the main alternatives studied by the developer and the reasons for the choice made, taking into account the environmental effects;
- the measures envisaged in order to avoid, reduce and/or remedy significant adverse effects that are unavoidable if the project is implemented.

In most instances it is the project proponent, *i.e.*, the investor, that is responsible for commissioning the EIA. Environmental authorities then review the document in order to ensure the document's completeness and objectivity.

An essential element of the EIA process is to inform the affected public about the proposed project and its likely impacts, and to provide them with an opportunity to voice their views. The authorities taking the decision as to whether to grant permission for the project are often required to take

account of public comment and to make their final decision (and the reasons for that decision) available to the public.

Until recently, the countries of Central and Eastern Europe (CEE) followed another tradition, whereby environmental authorities commissioned “ecological experts” to carry out independent evaluations of proposed projects prior to deciding whether to approve a particular project or not. As countries in the region move to harmonise their domestic legislation with European Commission requirements, a new element to the EAP process in CEECs has been added: to provide information on the proposed development to the public concerned and to provide opportunities for meaningful public participation in the eventual development decision and subsequent monitoring.

The twin requirements of transparency and public participation are in many ways the essence of the western approach towards the EIA process. The purpose of informing all stakeholders about the environmental impacts and of enabling them to make their views known is to hold decision makers more accountable for the consequences of their decision, so that they will act responsibly towards the environment. Effective public participation can also help to defuse local opposition to a proposed project by enhancing understanding and allaying fears, and by providing a means for the public to put forward suggestions for improving the project design.

One aspect of the EIA process often overlooked is the need for ongoing monitoring and oversight of the project once it is commissioned. This is important to ensure that all agreed-on mitigation measures are carried out. In some instances, independent and community-based panels have been established to assist authorities in this oversight task, and to address community concerns on an ongoing basis.

For example, a programme to expand production at the Slovalco aluminium smelter in Slovakia by replacing its out-dated smelters with state-of-the-art technology was almost halted by opposition from Slovak and international environmentalists. The environmentalists charged that the plans for expansion would increase electricity demand and add to the severe pollution problems caused by the state-owned complex of smelters for decades, including toxic air emissions and groundwater pollution.

In the early 1990s, Slovalco asked the European Bank for Reconstruction and Development (EBRD) and Hydro Aluminium, a subsidiary of Norsk Hydro, for financing. The EBRD required an independent environmental impact assessment (EIA) of the proposed investment as well as an environmental audit of the company’s current operations. Both studies indicated the investment project would lead to concrete environmental improvements by enabling closure of the existing plants.

The EBRD approved the investment, albeit with a number of environmental conditions financed by designated cash flows from the company. To address the public’s environmental concerns, a citizen-based Monitoring and Advisory Group (MAG) was established. The MAG has facilitated more open communication with the company’s management (which sits on the MAG’s seven-member steering group) and enabled local citizens to become involved. By 1998, the company had complied with most of the environmental conditions. Emissions of pollutants have been significantly reduced. Despite a doubling of smelting capacity, the new plant consumes only 10 per cent more energy than the original complex.

The EIA process has been less satisfactory when project proponents have sought to downplay risks or where the local populations most likely to be affected by a proposed project were not brought into the decision process. An example of a proposed investment project where consultation with the public was

too little, too late or with the wrong groups is the proposed international oil and gas development off the Sakhalin islands in Russia's Far East (Rosenthal and Mischenko, 1998).

The lesson seems to be that in countries where the political system is closed or where informed participation of local people is not possible, the EIA process may lead to unsatisfactory results or be subject to abuse. Nonetheless, it remains an important tool for evaluating the possible impacts of a project, and for determining what types of measures may be taken to avoid or minimise such impacts.

(b) *Environmental Audit*

Foreign direct investment in existing operations is often preceded by an environmental audit, as part of an investor's (and lender's) due diligence effort. The audit should

- determine whether the facility satisfies all government requirements and regulations in this area, including conditions of operating permits;
- identify and quantify any existing environmental liabilities at a site such as past environmental damage, *e.g.*, soil or groundwater pollution from past operations;
- evaluate the environmental performance of the operation, including the facility's environmental management capacity;
- propose measures to address the environmental problems identified during the audit.

If the regulatory framework is incomplete, the environmental consultants carrying out the audit may need to use internationally recognised standards as a reference point.

Once an operation's environmental problems are identified, the buyer and seller (and environmental authorities) must decide how to control any risks of future harm to people and the environment. The environmental audit enables the buyer and seller to agree on a fair price for the property, including how to allocate responsibility for the property's environment-related problems, *e.g.*, past environmental damage. It can be used as the basis for structuring specific environmental solutions into the deal itself. Where a property has serious environmental problems, risk assessment can be a useful methodology for determining the most cost-effective measures for reducing risk of harm in the future and for setting priorities for remedial action.

In several CEE countries, notably Romania and Bulgaria, environmental audits are now mandatory whenever an industrial property changes ownership, including in privatisation. It is increasingly common in the region for the sale of assets to a private investor to be made contingent on a package of social, environmental and investment commitments. As in the EIA process, the schedule of agreed environmental measures may become an integral part of the plant's operating permit. By providing a prospective investor with certainty concerning the extent of a plant's environmental liabilities, such procedures can help to bring significant FDI even to environmentally problematic properties.

The privatisation of the MDK copper smelter in Pirdop, Bulgaria is a constructive example of the importance of environmental auditing techniques in securing FDI for environmentally problematic properties. The smelter's past operations left millions of tons of tailings and slag contaminated with heavy metals and stored without precautionary measures.

Bulgaria's Privatisation Agency (PA) looked for a strategic investor to modernise the plant. Before agreeing to invest in the smelter, Union Miniere (UM) of Belgium sought an assurance from the Bulgarian government that it would cover the cost of any necessary cleanup. The World Bank helped facilitate the deal by structuring an arrangement that reduced financial risks for both the investor and the government. The arrangement will result in larger overall revenues for the government than had been expected.

In accordance with Bulgaria's environmental legislation, an environmental audit was carried out during preparations for privatisation. The environmental audit concluded that the plant's most critical environmental problem was a large settling pond containing semi-liquid wastes contaminated with heavy metals. An overflow or break of the unstable dam could release arsenic-contaminated sludge into a river feeding the drinking water supply of Plovdiv and other large towns. The audit recommended a plan for remediation of the settling pond and other past environmental damage, as well as other measures to bring the smelter into regulatory compliance.

On the basis of the environmental audit, the Ministry of Environment issued a decision obliging MDK-UM to implement the recommended environmental remediation plan and established a schedule for improving the plant's environmental performance. The decision became a condition of the plant's operational permit. The government also endorsed an environmental management plan that commits MDK-UM to taking a number of specific measures and investments to improve the smelter's environmental performance.

The estimated cost for emergency remediation of the unstable sludge pond and for cleanup of critical past environmental damage (US\$ 25 million) was set aside from the purchase price into an escrow account. A World Bank loan to the Government provided further assurance that money would be available for cleanup. Bulgaria's National Trust EcoFund provided grant financing for cleanup, and agreed to provide oversight and technical support for the arrangement on behalf of the Government.

The MDK-UM is carrying out the cleanup itself. It pays contractors up front and is reimbursed from the escrow account. Funds from the Bank loan are released to the government as the cleanup proceeds. The cleanup is expected to cost less than the amount in the escrow account. All unspent funds will be returned to the government after satisfactory completion of the cleanup.

In certain instances, and especially where the risk of environmental damage is significant, some host country governments have asked foreign direct investors to lodge performance bonds or other guarantees to ensure that remedial steps will be taken, should damage occur. Clear rules concerning private responsibility for damage to the environment from economic activities will also send a signal that investors will be expected to operate without causing unacceptable harm to the environment.

(c) *Effective Environmental Regulatory Frameworks*

As noted earlier in this paper, the establishment of an effective regulatory structure for controlling the environmental and social impacts of economic activities in general is a critical element of good governance. Adequate administrative structures for implementation and enforcement of legal requirements are also necessary.

Environmental permitting and standard setting are just two of the regulatory tools that have proven useful around the world. However, Western-style permitting of industrial installations can require specific expertise, since it is based on an evaluation of the technical feasibility of various pollution reduction measures. Host country environmental ministries may need to develop considerable technical

capacity in order to understand the environmental problems faced by new industries and to determine appropriate conditions for operating permits.

There is in this regard a need for internationally recognised environmental standards that could be used where comprehensive regulatory structures are not yet in place. Such standards can be used by host countries to provide potential private sector investors with predictable, consistent and clear rules concerning their environmental responsibilities.

One rule of thumb concerning the level of standards is that all new “greenfield” investments should comply with internationally recognised environmental standards for that sector, in view of the fact that retrofitting a plant is more expensive than designing and building it right in the first place.

A more difficult question concerns the level of standards to apply to existing plants undergoing upgrading of technology or in the case of investors seeking to bring in “dirty processes”, *e.g.*, used or outdated technologies no longer in compliance with source country standards. In such cases, government decisionmakers need to weigh the potential cost of any pollution that may occur, including public discontent if pollution is excessive.

(d) Strategic Planning

In recent years, awareness has grown concerning the importance of assessing not only proposed projects but also government policies, plans and programs for their potential environmental impact, before final decisions are taken. This process, known as strategic environmental assessment (SEA), is now starting to be included in government planning processes.

Strategic environmental assessment may be particularly advantageous in determining the design and allocation of concessions for resource exploitation, including mining (World Bank, 1998a). For example, the concept of biodiversity or cultural “hot spots” has been broached as a possible development constraint. A SEA of a proposed resource exploitation programme would help to determine if such “hot spots” would be affected, such that constraints should be imposed.

Governments seeking to build social and environmental goals into their economic development planning might use SEA in developing sustainable investment policies and complementary regulatory frameworks. For example, proposed FDI in an automobile assembly plant could create jobs and contribute to economic development, but the increase in automobile traffic and emissions could lead to costly social and environmental impacts.

The effectiveness of the tools described above in ensuring that foreign investment contributes to maintaining or enhancing environmental quality depends on, *inter alia*, the competence of the government officials and environmental professionals involved. Enforcement of the rule of law, an open society and an educated and environmentally-aware public are also important elements.

Given the importance of transparency and public participation in ensuring environmentally sound project design and operations, host countries should consider measures to ensure a supportive legal environment so that NGOs can act as constructive and independent partners in the effort to achieve sustainable development.

But what if a host government is not accountable? Many of the instances where FDI has been linked to insupportable environmental damage have occurred where corrupt officials have turned their backs on environmentally harmful practices and failed to protect vulnerable citizens from the

consequences of the economic activities carried out by a powerful few. In such instances, the only option may be for the international community -- including FDI-source country governments -- to act.

4. The Role of the International Community in Managing Environmental Risks Associated with FDI

The rapid pace of globalisation, the competition for FDI, and the sheer size of many multinational enterprises can make it difficult for a host country acting alone to set in place adequate environmental controls over incoming FDI. Pressure is therefore mounting on other stakeholders, including investment source countries and the international financial institutions (IFIs), to take a larger share of responsibility in this area. International attention to a project's environmental aspects is particularly important where a host country's framework of environmental rules and capacity for enforcement is still rudimentary.

The argument for shared responsibility rests on the fact that many types of FDI do not occur without some form of governmental, bilateral and/or multilateral co-financing, risk insurance and guarantees. Most large infrastructure projects are structured on a "non-recourse" basis, *i.e.*, private commercial banks approached for financing do not have access to the parent company's assets in the case of project failure and loan default. Private banks will not extend financing for such projects unless the financial risk is at least partially covered by publicly financed export credit and investment insurance agencies, and/or private sector support provided through the IFIs.

(a) International Financial Institutions

The IFIs have been in the forefront of assuming a share of responsibility by setting in place procedures to assess the environmental impacts of their project development and lending activities. Today virtually all IFIs have environmental guidelines in place to assess environment-related risks prior to determining which projects to finance.

For example, the World Bank requires all proposed projects to be screened to determine their potential environmental impact. This includes private sector projects financed through the Bank's International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA). Projects identified as posing significant environmental risk must undergo environmental assessment (EA). The result of the EA may lead to mitigation efforts being built into the project deal, as well as support for developing the host country's institutional capacity for environmental protection.

Environmental conditionalities are also frequently built into project financing agreements, as in the examples of the MDK copper smelter privatisation in Bulgaria and the Slovalco aluminium smelter discussed above.

International organisations also have an important role to play in developing internationally recognised environmental standards. One example of this is the World Bank's *Pollution Prevention and Abatement Handbook 1998: Toward Cleaner Production* (World Bank, 1998b), which provides indicative emission limit values for different types of industrial processes. Another significant international effort is UNEP's programme to develop internationally recognised guidelines on best environmental practices for various industrial sectors.

Internationally recognised guidelines are also needed concerning how concessions for resource exploitation can be based on principles of sustainable development. The Forest Stewardship Council's

certification scheme for sustainably produced wood products is worthy of note in this regard. UNEP has also produced environmental guidelines for various resource extraction industries.

(b) Source Countries

A consensus has emerged over the years that source countries also have responsibility to ensure that commercial activities originating on their territory do not cause environmental problems in another country's territory. An example of this is the Basel Convention obligation that countries of origin must repatriate shipments of waste that cannot be safely handled or disposed of in the country of destination.

Yet most source countries have resisted taking measures to ensure that outward bound FDI does not cause undue environmental damage. Some source country governments have argued that any unilateral measures would be patronising and impinge upon the sovereign right of host countries to take their own decisions concerning FDI.

Source country governments are now under pressure to act, in large part because of the increasingly important role played in recent years by national export credit agencies (ECAs) in providing capital for source country investors seeking new opportunities abroad. Total annual commitments of export credit agencies have quadrupled over the past decade, from some US\$ 26 billion in 1986 to US\$ 105 billion in 1996 (Boote and Ross, 1998). Today, the ECAs' role in catalysing private sector finance is even greater than that of the multilateral development banks. Unfortunately, very little is known about the amounts of financing covered by ECAs on a project by project, sector by sector, or even country by country basis.

Most countries' ECAs operate without transparency or accountability, and with little input from national development assistance agencies and ministries, let alone environment ministries (Rich, 1998). Only a few have environmental guidelines similar to those in place in the IFIs. Ironically, almost all OECD countries' bilateral development assistance agencies have environmental assessment procedures already in place. The fact that most national ECAs do not carry out environmental assessments is a striking inconsistency.

The ECAs are now under pressure to develop common environmental assessment policies, guidelines and standards so as to ensure adequate assessment of FDI for environment-related risks before government funds are used to support private sector project financing. In 1998, the OECD Working Party on Export Credits and Credit Guarantees agreed to address environmental concerns in its deliberations.

So far most ECAs have resisted taking action in this area, maintaining they do not have the technical capacity to conduct environmental reviews or to evaluate common standards, and that adding technical capacity will make the review process too cumbersome bureaucratic, or politically impossible. But capacity already exists within national environmental and development assistance ministries that could be tapped via interagency co-operation. In any case, without a common approach, one or more ECAs could be put at a competitive disadvantage if they institute more rigorous, comprehensive environmental assessment.

Source country governments also have an important role to play in fighting bribery and other types of corrupt practices that have in the past often been associated with exploitative resource extraction activities or non-enforcement of environmental regulations and standards. The Anti-Bribery Convention recently negotiated within the framework of the OECD is the strongest international instrument to date in this area.

Even where ECAs have taken decisions in view of the potential or actual environmental impacts of an investment, the leverage exerted on an investor to implement better environmental practices may be limited. In 1996, for example, the US Overseas Private Investment Corporation (OPIC) suspended risk insurance for the US mining company Freeport McMoRan's gold mine operation in Indonesian New Guinea. OPIC cited the "unreasonable" major environmental, health and safety hazards created by the company's operations, including the dumping of over 120,000 tonnes of toxic mine waste into local rivers every day (Project Underground, 1997). Shortly after the insurance had been reinstated, Freeport cancelled its insurance by the U.S. government, reportedly to avoid further investigation into its activities in Indonesia.

Source country governments are also under pressure to require foreign investors to use internationally recognised environmental standards wherever they operate in the world, and particularly in those host countries where regulatory structures are not yet complete. Since many transnational corporations have already instituted a uniform environmental management system throughout their global network, a source country policy of this nature could build on and extend this existing experience. Several source country governments -- notably Denmark and the Netherlands -- have already set in place policies or programmes to encourage outward investment to follow stringent environmental standards and practices.

The role of source countries should also extend to ensuring that host country plaintiffs who have been injured by the activities of foreign investors have access to justice in source country court systems.

The principle of access to justice for environment-related injuries is one of the three pillars of the 1998 UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters ("the Aarhus Convention"). This principle is already in place and being used in some FDI-source countries. For example, some U.S. foreign investors are currently the target of legal actions by injured workers and local citizens. A suit brought against Texaco by rainforest Indians from Ecuador and Peru has even been joined by the Ecuadoran Government (Appleson, 1998). The Indians claim that a Texaco subsidiary dumped an estimated 30 billion gallons of toxic waste into their environment while extracting oil from the Ecuadoran Amazon between 1964 and 1992. If Texaco loses, clean-up costs, compensation for devastation to the rainforest, and alleged increased cancer risks could lead to a claim exceeding US\$ 1 billion.

(c) *International Civil Society*

Driving the effort to ensure that source country and international institutions act responsibly with regard to FDI and its impacts is an emerging global civil society based on the same cross-border flows of information that are transforming the global economy. The increasing use of international coalitions of NGOs, parliamentarians and unions to focus attention on the environmental impacts of a proposed or ongoing project gives evidence to this. In this context, the internet is transforming the speed and reach of information flows within and across countries.

The proposed Chad-Cameroon pipeline project is a case in point. A consortium comprising Esso, Shell and Elf petroleum companies is seeking to construct a pipeline that would bring oil from oil fields in Chad through Cameroon to a port on the Gulf of Guinea. The project is estimated to cost 20 times the national budget of Chad (ARB, 1998). The governments of Chad and Cameroon are also participating in the expectation that construction and operation of the pipeline will create job opportunities and provide revenue.

An environmental assessment of the proposed pipeline carried out in order to qualify for World Bank funds has drawn fire for, *inter alia*, failure to carry out adequate consultations with local indigenous communities, including pastoralists, who face displacement by the project. An independent review of the environmental assessment by a Netherlands commission pointed out a number of gaps. It raised concern about local capacity to monitor project implementation and recommended establishment of an international advisory group to assist in this regard. In particular, it noted the need to monitor compliance with the Bank's internal operational directives and policies on environmental assessment and management, poverty alleviation, resettlement issues, indigenous people, forests, natural habitats and public participation in the project (CMER, 1998).

In view of the shortcomings of the environmental assessment process, and because the pipeline will traverse some of Africa's last remaining rainforest, a global coalition of some 70 NGOs from the United States, France, Switzerland, Germany, Cameroon and other countries has developed in opposition to the project. In particular, they have raised questions about the validity of an environmental assessment process where the affected public is unable to participate effectively because of, for example, low literacy rates.

This prospect of a global public concerned about the environmental consequences of foreign and domestic investment and the adequacy of opportunities for participation in decision making by those affected is an interesting development. Concerned citizens can serve as "whistle-blowers", drawing attention to instances where investors' activities may be harming the environment. They can also be an important part of the environmental impact assessment process in providing new environmental information as well as constructive criticism of the proposed development.

Indeed, as noted above, instruments like EIA work only as long as there is transparency, accountability and ongoing monitoring and reporting. Thus a strong civil society is an essential component of an effective system of environmental protection and management. This argues for governments everywhere to foster local community and citizens groups and to protect their right to give their points of view.

If governments and investors react to restrict information and access to decisions, the consequence may be increased opposition to investment projects, creating costly delays. A more enlightened response will be to ensure free flow of information and transparency of decisionmaking, and to hold investors in both manufacturing and resource extraction industries to high international environmental standards, wherever they operate.

5. Conclusions

The task of managing the environmental impacts of FDI involves many stakeholders: host country governments, source country governments, citizens at large, international financial institutions, and investors themselves.

The role of host country governments is particularly critical. At a minimum, governments need to set in place effective environmental regulatory regimes and to enforce them. It is equally important that host countries establish policy frameworks for achieving environmentally and socially sustainable economic development.

Source country governments have an important role to play in the effort to ensure that FDI contributes to sustainable economic development. Their responsibility is especially acute where host

country governments do not have capacity for effective environmental governance, or the political will to curb corruption. Source country actions should include: (1) adherence to the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, and enforcement of its provisions; (2) requiring mandatory environmental assessment by export credit agencies before supporting outbound FDI; (3) support for international environmental standards as a minimum for all outbound FDI; and (4) opening of source country court systems to allow host country plaintiffs to obtain redress when FDI generates environmental harm.

It is striking that the examples cited in this paper where environmental concerns were successfully integrated into proposed investments were the result of pressure from IFIs and citizens groups, and not from host country or source country governments. The failure of many governments to act often stems from a lack of understanding on the part of those officials responsible for setting economic and investment policy. At the same time, environmental officials are often insufficiently influential in national debates on economic policy. Problems are particularly acute in those countries where corruption is rife.

In short, more needs to be done in this area. In particular, more attention needs to be paid to the building of regulatory frameworks and development of the necessary institutional capacity so that host countries can hold investors accountable for the environmental impacts of their activities.

The regulatory tools at hand for addressing environmental concerns in the development process are useful, but not a panacea. To be effective, the EIA process must be carried out at an early stage in the project's development, when changes in the project or investment design are still possible. It must also be carried out under conditions of transparency and accountability, so that affected stakeholders can understand the implications of a proposed project and speak out in the confidence that their views will be taken into account. When the EIA process is subverted or curtailed, public opposition may raise new obstacles to the project. Multinational investors that do not adequately address environmental issues in investment decisions may find themselves the targets of concerted actions from local and foreign stakeholders and interest groups.

One of the most interesting developments of recent years is the growing role of other stakeholders, including IFIs and global coalitions of NGOs, in bringing pressure for more transparency and accountability in decision-making. In an increasingly globalised world, this role may become indispensable. When the annual turnover of many multinational investors often grossly exceeds a host country's GDP, even conscientious governments may find it difficult to direct incoming investment toward meeting national economic, social and environmental goals. In such instances, national efforts to bring about sustainable economic growth may indeed require support from the international community at large.

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FOREIGN DIRECT INVESTMENT AND THE ENVIRONMENT: THE ROLE OF VOLUNTARY CORPORATE ENVIRONMENTAL MANAGEMENT

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1. Introduction

Foreign direct investment (FDI), like any direct investment, can have an impact on the environment of the host country and beyond. The issue of the environmental impacts of FDI attracts particular interest, however, partly because investment projects may be of a larger scale and have a higher public profile than domestically-sourced investment in many small to medium sized countries. Multinational enterprises are also thought to have greater possibilities either to introduce leading-edge environmental technologies and practices on the one hand, or to be able to exert pressure for reduced environmental performance standards on the other. They are therefore, paradoxically, the subject of both higher expectations and greater fears with respect to the environment in the public at large.

Given rapid rates of growth of FDI, and increased pressure from stakeholders such as shareholders, communities, employees, NGOs, financiers as well as regulators for improved corporate environmental performance, there is an increasing amount of scrutiny of the environmental consequences of foreign direct investment. A growing number of companies and industries are responding in advance of host government mandatory requirements in addressing environmental aspects of their international operations through voluntary approaches.

These voluntary approaches, their strengths and weaknesses, and the emerging best practice in this field, are the subject of this paper.

(a) *Voluntary Approaches: What Are They ?*

The main voluntary approaches examined here are voluntary codes, or statements, of corporate conduct for the environment and corporate environmental reporting. Environmental management systems will also be mentioned very briefly. So-called ‘voluntary agreements’, whereby companies or industries reach agreements with governments over how they will tackle a particular environmental issue are not covered here.

Voluntary approaches of course stand in contrast to *mandatory* approaches to addressing the environmental effects of investment, which predominantly takes the form of host country policy and regulation. Environmental policy will still be the most important way for most countries of ensuring that direct investment takes place in a way that guarantees acceptable levels of environmental protection. While it can be argued that the internationalisation of markets is reducing the effectiveness of national policy in some areas, basic domestic environmental protection need not necessarily be one of those areas.

Laws and regulation, along with market-based instruments such as taxes and charges, still form the basic framework of domestic environmental protection. Voluntary approaches are in the vast majority of countries a complement to, not a substitute for, basic government policy.

So why do inter-governmental organisations, national and international business associations, industry groups and companies make the effort to undertake voluntary initiatives on the environmental aspects of their operations? At the inter-governmental level, governments have clearly believed there is suasion value in setting down their expectations or hopes as to how they would like multinational enterprises to act with respect to the environment. Aside from agreeing to multilateral environmental agreements on specific environmental issues, this is the way that governments have sought to put in place some form of indicative standards for international actors in the absence of a binding set of international rules governing them. Agenda 21 is the leading example of this. Others include the OECD Guidelines for Multinational Enterprises, and UNEP codes of conduct.

International business associations have sometimes taken the lead in promoting an environmentally responsible approach for their membership through voluntary environmental principles, guidelines or codes. While there is certainly a public relations aspect to approaches such as environmental codes of conduct, there has also been a recognition that the environmental area is one where business in general is being increasingly held to account by the public, international environmental groups, financial institutions, shareholders, host governments and employees.

Business associations can therefore provide their members with a valuable service by collectively addressing, and being seen to address, environmental issues of importance to stakeholders. This has particularly been the case in industries with environmental public relations problems such as chemicals and mining. Industry associations have sought not only to improve the environmental image of their member companies, but also to stave off regulation and also to actually improve environmental performance.

From a corporate point of view, there are likely to be several kinds of benefit to adopting voluntary approaches to the environment. Public relations, image, reputation can be enhanced by creating a socially and environmentally responsible image. More concretely, better environmental performance can often be synonymous with improved quality control of final products, of improved plant operating efficiency with less resource use and less waste, leading to increased profitability. The resource productivity or eco-efficiency school of environmentally aware business which advocates and implements this win-win situation seems to be gaining in strength. Voluntary approaches going beyond compliance with government regulatory requirements underpin this approach.

For the public, there is still significant scepticism of voluntary approaches by business to the environment. Highly publicised controversial environmental incidents have a longer life in the public imagination than any amount of good policy and practice. However, a corporate code of conduct will be viewed as preferable to none. It demonstrates a willingness to be held publicly accountable for its efforts with respect to the environment. The more stakeholder involvement a company allows for in policy development and implementation, the more credible will be voluntary approaches. Companies have traditionally underestimated the degree to which community and stakeholder involvement in environmental aspects of their operations is essential for improving their reputations and credibility. Also, the more that quantifiable, measurable environmental performance targets are set by corporations, and externally verified, the more credible their efforts. Linked closely to these two points is the degree of transparent public reporting of environmental performance measures and targets.

2. Voluntary Codes of Conduct or Guidelines for the Environment

Corporate or industry codes of conduct are generally not specifically directed at either the process of making a particular investment or the ongoing operation of foreign installations. One exception is that of the Japan Federation of Economic Organisations (*Keidanren*) “Environmental Guidelines for Japanese Enterprises Operating Abroad”. However, as codes of conduct are predominantly adopted by multinational enterprises (MNEs) they are relevant to FDI because they cover the global operations of the enterprise.

Environmental conditions more directly related to the investment process include the World Bank’s Environmental Guidelines and similar environmental performance requirements of some regional development banks and some national export credit agencies. These are, however, of the nature of contractual conditions attached to loans or insurance rather than voluntary approaches, and are not further discussed here. Also, while individual companies have a range of particular initiatives with respect to environmental and social programmes, *e.g.* employee or community awards, education projects, health programmes *etc.*, they are not the subject of this paper.

There is a wide range of voluntary codes of environmental conduct currently in the marketplace. The earliest dates from the 1970s, but the majority of activity seems to have arisen around the 1992 UNCED at Rio. They range from inter-governmental, to international and national business declarations, to industry-based codes to individual corporate policy statements. The subject matter, the level of detail, the degree of commitment required by these statements varies enormously. Some statements are written in terms of the environment, whereas some of the newer ones have adopted the broader newer concept of sustainable development, incorporating both environmental protection and social equity aspects.

Agenda 21 is particularly important because it is a statement that most Governments have already subscribed to, and it was prepared with wide community and business input. It dedicates a chapter to business and addresses other recommendations throughout the document to enterprises. The Chapter addressed to the behaviour of enterprises is reproduced at Annex 1 of this paper.

The OECD also has Guidelines for Multinational Enterprises which, since 1991, have contained a chapter on the environment. The Guidelines date from 1976, and they are still the only international code of conduct for multinational enterprises endorsed by governments as well as business and labour representatives (*i.e.* by BIAC and TUAC, the OECD’s advisory bodies of employers and trade unions, respectively). The Guidelines have been considered an important component of the overall set of OECD principles and decisions concerning investment. This broader set of legal instruments includes rules on non-discriminatory treatment of foreign-owned enterprises. Each OECD Member country has agreed to recommend these guidelines to their enterprises, and has established a contact point in its administration to deal with inquiries *etc.* Argentina, Brazil and Chile have also adopted the OECD investment instruments, including the non-binding guidelines.

These OECD Guidelines are currently the subject of a periodic review within the OECD. The review, initiated in June 1998, will be aimed *inter alia* at modernising the environmental chapter. The review process will include consultations with all stakeholders, including NGOs. The environmental chapter is reproduced at Annex 2.

Also of particular interest are two leading international business codes of environmental conduct, namely the Business Charter for Sustainable Development of the International Chamber of Commerce (ICC) and the CERES principles. The former is the most widespread and well known of the

generic codes of environmental conduct. The latter is the most ambitious and demanding of the general statements.

The Business Charter for Sustainable Development, sponsored by the International Chamber of Commerce (ICC), is the most well-known business statement on the environment. More than 2000 companies have endorsed the Charter, many of them large MNEs, and the ICC covers all business sectors. The Charter consists of 16 principles that are described as a framework to help industries and individual corporations define their own more specific environmental policies.

The following table shows the 16 principles of the Charter and indicates where the OECD Guidelines for Multinational Enterprises and Agenda 21 cover their subject matter. The full text of the Charter is presented in Annex 3.

Table 1: ICC Business Charter for Sustainable Development and its Overlap with the OECD Guidelines for MNEs and Agenda 21

| ICC Business Charter for Sustainable Development | OECD Guidelines for MNEs | Agenda 21 |
|--|---------------------------------|------------------|
| <p>1. Corporate priority</p> <p>To recognise environmental management as among the highest corporate priorities and as a key determinant to sustainable development; to establish policies, programmes and practices for conducting operations in an environmentally sound manner</p> | No | Yes |
| <p>2. Integrated management</p> <p>To integrate these policies, programmes and practices fully into each business as an essential element of management in all its functions</p> | No | No |
| <p>3. Process of improvement</p> <p>To continue to improve corporate policies, programmes and environmental performance, taking into account technical developments, scientific understanding, consumer needs and community expectations, with legal regulations as a starting point; and to apply the same environmental criteria internationally.</p> | No | Partly |
| <p>4. Employee education</p> <p>To educate, train and motivate employees to conduct their activities in an environmentally responsible manner.</p> | Yes | No |
| <p>5. Prior assessment</p> <p>To assess environmental impacts before starting a new activity or project and before decommissioning a facility or leaving a site.</p> | Partly | No |
| <p>6. Products and services</p> <p>To develop and provide products or services that have no undue environmental impact and are safe in their intended use, that are efficient in their consumption of energy and natural resources, and that can be recycled, reused, or disposed of safely.</p> | No | Yes |

| | | |
|---|----|-----|
| <p>7. Customer advice</p> <p>To advise, and where relevant educate, customers, distributors and the public in the safe use, transportation, storage and disposal of products provided; and to apply similar considerations to the provision of services</p> | No | No |
| <p>8. Facilities and operations</p> <p>To develop, design and operate facilities and conduct activities taking into consideration the efficient use of energy and materials, the sustainable use of renewable resources, the minimisation of adverse environmental impact and waste generation, and the safe and responsible disposal of residual wastes</p> | No | Yes |
| <p>9. Research</p> <p>To conduct or support research on the environmental impacts of raw materials, products, processes, emissions and wastes associated with the enterprise and on the means of minimising such adverse impacts.</p> | No | Yes |
| <p>10. Precautionary approach</p> <p>To modify the manufacture, marketing or use of products or services or the conduct of activities, consistent with scientific and technical understanding, to prevent serious or irreversible environmental degradation.</p> | No | No |
| <p>11. Contractors and suppliers</p> <p>To promote the adoption of these principles by contractors acting on behalf of the enterprise, encouraging and, where appropriate, requiring improvements in their practices to make them consistent with those of the enterprise; and to encourage the wider adoption of these principles by suppliers</p> | No | No |

| | | |
|---|---|-----|
| <p>12. Emergency preparedness</p> <p>To develop and maintain, where significant hazards exist, emergency preparedness plans in conjunction with the emergency services, relevant authorities and the local community, recognising potential transboundary impacts.</p> | Yes | Yes |
| <p>13. Transfer of technology</p> <p>To contribute to the transfer of environmentally sound technology and management methods throughout the industrial and public sectors</p> | Partly – in general terms not specific to environment | Yes |
| <p>14. Contributing to the common effort</p> <p>To contribute to the development of public policy and to business, governmental and inter-governmental programmes and educational initiatives that will enhance environmental awareness and protection.</p> | Partly – in general terms not specific to environment | Yes |
| <p>15. Openness to concerns</p> <p>To foster openness and dialogue with employees and the public, anticipating and responding to their concerns about the potential hazards and impacts of operations, products, wastes or services, including those of transboundary or global significance</p> | Yes | Yes |
| <p>16. Compliance and reporting</p> <p>To measure environmental performance; to conduct regular environmental audits and assessments of compliance with company requirements, legal requirements and these principles; and periodically to provide appropriate information to the Board of Directors, shareholders, employees, the authorities and the public.</p> | Partly | Yes |

There is not as much overlap between the Business Charter and Agenda 21 as might have been expected, given the participation of the ICC in the formulation of Agenda 21. The different perspectives of policy makers and business perhaps explain this. Agenda 21 seems to cover the role of business in the broader community more than the Business Charter, which tends to focus more on the internal activities of enterprises.

The Coalition for Environmentally Responsible Economies (CERES) was formed in 1989. It brings together fifteen major US environmental groups and an array of socially responsible investors and public pension funds representing more than US\$150 billion in invested funds³. The Coalition designed

³ See <http://www.ceres.org/about>

the ten principles, originally known as the Valdez Principles, but now called the CERES Principles. CERES endorsers are businesses and other organisations which have publicly committed to the CERES Principles. According to the CERES website, 46 companies and organisations have endorsed the CERES Principles including General Motors, Polaroid, Bethlehem Steel, the Body Shop, Aveda, Sun Oil and H.B. Fuller.

The ten principles are briefly stated and they aim high. They cover the substantive environmental issues of protection of the biosphere (emissions and biodiversity), sustainable use of resources, disposal of wastes, energy conservation, risk reduction, safe products and services and environmental restoration, as well as the process issues of public information, management commitment, and audits and reports. They recognise explicitly that companies endorsing the Principles pledge to go voluntarily beyond the requirements of the law. The Principles are reproduced in Annex 4.

Apart from the substantive content, the CERES Principles are also the high water mark in terms of commitment to monitoring implementation and reporting on progress. Endorsers commit to complete a CERES report on progress in implementing the Principles annually and to make it public. In addition, CERES has a 'Global Reporting Initiative' which is attempting to bring together the various initiatives world-wide on corporate environmental reporting and to turn them into one set of coherent, consistent global standards. The aim is to generate standard environmental information akin to existing standard financial information.

Industry associations covering resources, manufacturing and services industries are adopting codes of environmental conduct to guide their constituent member companies. They can be international industry associations, national industry associations, or national cross-sectoral business associations. Some prominent examples are listed below⁴.

- The chemical industry's Responsible Care[®] programme is the most sophisticated and advanced voluntary approach to environmental matters in a particular industry. Responsible Care[®] exists in international, regional and national versions. Around 40 countries have national programmes run by the national chemical industry associations. Responsible Care consists of a basic commitment to pursue continuous improvement of environmental, health and safety practices, and enhance public outreach. This is to be achieved through the adoption of guiding principles and the implementation of various specific management practice codes covering the whole production chain, namely Community Awareness and Emergency Response (CAER), pollution prevention, process safety, distribution, employee health and safety, and product stewardship. Self-assessment against the requirements of Responsible Care[®] is a mandatory part of all national programmes, but these do not have to be disclosed. Some attention has started to be given to third party verification in recent years⁵.
- The "UNEP Statement by Financial Institutions on the Environment and Sustainable Development", revised in 1997 with about 115 signatories. Similarly, UNEP has worked with

⁴ A longer list is contained in "Voluntary Industry Codes of Conduct for the Environment", UNEP Technical Report No.40. This Technical Report provides guidance to industry associations and others on how to develop and use voluntary codes.

⁵ For a critique of Responsible Care, see Janice Mazurek "The Use of Unilateral Agreements in the United States: The Responsible Care Initiative". Paper presented to an OECD Workshop on the Use of Voluntary Approaches in Environmental Policy, 1-2 July 1998. The author is a consultant with Resources for the Future (RFF) in Washington D.C.

insurance companies to develop the “Statement of Environmental Commitment by the Insurance Industry”⁶. This was officially launched in November 1995 and about 75 insurance companies have signed the statement.

- The 1993 International Council on Metals and the Environment (ICME) Environmental Charter⁷.
- The 1996 Australian Minerals Industry Code for Environmental Management⁸, reproduced at Annex 5.
- World Travel and Tourism Council, “Green Globe” environmental guidelines⁹.
- The Japan Federation of Economic Organisations (Keidanren), Keidanren Global Environmental Charter. The Keidanren has also promulgated “Environmental Guidelines for Japanese Enterprises Operating Abroad”.

Large numbers of individual companies have published corporate environmental policies, value statements or reports of various kinds. They range from ethics statements which lay down expected standards of behaviour of employees, via value statements which give an organisation’s operating philosophy and dedicated environmental policy statements to highly sophisticated published environmental accounts and reports.

The 1991 UNCTAD Benchmark Survey of around 170 MNEs found that 43 per cent of all respondents had a published international environmental policy statement: 70 per cent of North American respondents, 41 per cent of European respondents, and 18 per cent of Asian respondents. It also found that MNEs in the top-third sales group were almost twice as likely to have a policy statement as MNEs in the bottom-third sales group. The extractive-based sector was found to be the sector that was by far the most represented at 60 per cent of the total¹⁰.

These statistics underpin the fact that voluntary codes of conduct are prevalent mainly in the US, the UK, Scandinavia, Canada, Australia, the Netherlands and, to a lesser extent, Japan. Their incidence is spreading however. Interesting examples of codes in non-OECD countries are in the Philippines and Brazil. Other developing countries are also gradually adopting such codes, often through the influence of environmental business associations and multinational corporations¹¹.

The content and nature of corporate policy statements which refer to environmental issues varies substantially, and it is therefore difficult to generalise. They range from simplistic generalisations to detailed guidelines and targets. It does seem, however, that the emphasis is more often placed on internal corporate environmental, health and safety issues than on environmental issues more broadly. Protecting the immediate environment surrounding a production facility seems to come next in frequency, followed

⁶ See <http://www.unep.ch/eteu/insura/statemen.htm>

⁷ See <http://www.icme.com>

⁸ See <http://www.minerals.org.au>

⁹ See <http://www.wttc.org>

¹⁰ *Environmental Management in Transnational Corporations: Report on the Benchmark Corporate Environmental Survey*. United Nations. Geneva. 1993: p.13

¹¹ Fritz Balkau. “Environmental Codes in Industry”. Paper presented to the Australian Minerals Industry Conference “The Code: Delivering Results”, October 1998, Melbourne.

by more general environmental commitments. Not surprisingly, companies in industries with traditionally the largest public relations problems in the environmental area such as chemicals, petrochemicals, energy and extractive resources have the most far-reaching policy statements.

The UNCTAD Benchmark Survey noted that the level of detail varied, with decentralised and diversified companies producing more general statements than more centralised, focused companies. It found that “in general, the statements covered the following issues: a definition of environmental protection (preventative, integrative, international validity), research and development, aspects of process and product safety, health protection, production technology, environmental protection technology, control and environmental information instruments, responsibility of employees, environmental management practices, environmental protection measures, emergency plans, information to the public, and relations with customers.”¹²

Some policy statements also spell out implementation procedures. Some specify the appropriate officer in the company to whom suspected breaches of the codes or policies are to be reported. Others have annual systems of reporting where each level of management seeks written confirmation from their subordinates of adherence to the policy. Royal Dutch/Shell Group for example, had an independent auditor¹³ verify the fact that its revised “General Business Principles” had been formally adopted by all Shell companies world-wide.

Despite these efforts by leading companies, implementation of corporate and industry environmental codes is clearly their weak point. Too often, no implementation procedures are spelled out. In the absence of effective implementation, voluntary codes may well simply add to public scepticism of the *bona fides* of business and industry with respect to the environment. Even if codes are implemented, this often means that good environmental policies and management processes have been put in place. Of themselves, they are not likely to inspire solid public confidence in the absence of quantifiable performance targets against which actual environmental *performance* can be monitored, assessed, externally verified and publicly reported on.

(a) Corporate Environmental Reporting

Policy statements or codes of conduct therefore are increasingly only the background against which real efforts in terms of corporate environmental management takes place. Real efforts are now being made by the most progressive companies in the more concrete areas of environmental accounting. Policy statements are being converted into measurable performance targets, which are set, measured, audited and publicly reported upon. An even more advanced version includes social reporting as well. The philosophy behind these efforts is that actions are more convincing than words, and, in business, anything has to be measurable if it is to be taken seriously.

An important element of corporate environmental management therefore is setting performance targets in various environmental indicators such as emissions, energy usage, waste generation, and material use. Progress in improving environmental performance can then be measured against the targets, and that information made available to the public. Many large companies, particularly in the

¹² *Environmental Management in Transnational Corporations: Report on the Benchmark Corporate Environmental Survey*. United Nations. Geneva. 1993: p.15

¹³ The auditors were KPMG Accountants and Price Waterhouse. See <http://www.shell.com/shellreport/pages/audit.htm>.

manufacturing, energy and extractive resources industries, now compile annual environmental reports which contain environmental data such as emissions to air, land and water; hazardous and other waste generation; energy efficiency; environmental technology improvements; site remediation projects, environmental research programmes; employee incentive schemes or prizes for environmental improvement, *etc.* These reports are increasingly being independently audited and verified to meet the demands of shareholders, customers and the general public for rigour and accountability of environmental performance.

An environmental consultancy firm, SustainAbility, in co-operation with UNEP, has compiled a survey of 100 selected company environmental reports and ranked them against 50 reporting criteria¹⁴ The survey found a seven-fold increase in the proportion of company environmental reports which were independently verified from the initial 1993-94 survey¹⁵ to the most recent 1997 survey (of a different sample of 100 companies). Independent verification was, however, still only performed by 28 per cent of the companies in the survey. The survey provides very interesting company-specific information on environmental reporting, including the rating of the 100 selected companies. The Body Shop is awarded the highest score for its environmental reporting. Environmental reporting is, of course, not the same as environmental performance -- there could be very full reporting of bad performance -- although full reporting is more likely to promote good environmental performance.

An even more ambitious kind of environmental accounting is being attempted by some leading companies. This involves developing sustainability performance indicators from both an environmental and a social perspective, and plotting progress against these indicators. It is called 'triple bottom line performance' in the UNEP SustainAbility report referred to above. The aim is to augment traditional financial bottom line measurements with environmental and social measurements. This methodology is very much in its infancy, but demonstrates the need felt in the corporate community to make environmental policy statements increasingly quantifiable and verifiable, and to operationalise commitments to sustainable development by taking social factors into account as well as environmental ones. For example, Royal Dutch/Shell Group is currently working on how to devise and report a triple bottom line performance, as is The Body Shop and others.

As well as individual company efforts, there is work underway in several international business fora on how companies can quantify and assess sustainable development indicators. For example, the World Business Council for Sustainable Development (WBCSD) is working on a project called Corporate Social Responsibility (CSR), which aims to include consideration of the social dimension of sustainable development with those of economics and environment. As part of the project, fifteen organisations with a code or principles document, including the OECD Guidelines, were examined. The documents were analysed and six common primary values were distilled: human rights, worker rights, environment, community involvement, supplier relations and monitoring. Building on this, environmental and social 'ledgers' have been developed which set out performance indicators, performance measurements and evaluation mechanisms. The environmental performance indicators are in four areas: materials use, energy consumption, non-product output, and pollutant releases. The social ledger has four areas of

¹⁴ "Engaging Stakeholders: The 1997 Benchmark Survey – The Third International Progress Report on Company Environmental Reporting". Report prepared by SustainAbility/UNEP. 1997. See also <http://www.sustainability.co.uk>.

¹⁵ "Company Environmental Reporting – A Measure of the Progress of Business and Industry Towards Sustainable Development". UNEP Technical Report No. 24. 1994.

performance requirements: employment practices, community relations, ethical sourcing, and the social impact of the product¹⁶.

On another front, environmental management systems such as ISO 14000 can also be seen as a way in which companies can put their environmental policy statements into practice. Such environmental management systems, of course, only concern management systems and process questions, not environmental performance itself. Nevertheless, the two are likely to be closely related, and should be seen as complementary. If a code of conduct specifies the environmental objectives of a company, an environmental management system can provide the procedural mechanisms for implementing those objectives.

3. Emerging Best Practice?

While the style and content of the various industry and corporate codes vary significantly, some generalisations about what constitutes best practice approaches in environmental codes can be made.

- first, state-of-the-art codes commit companies to sustainable development and to managing their activities such that economic, social and environmental considerations are integrated into decision making and management.
- second, commitments are made to setting measurable goals for improving environmental performance,
- third, monitoring, assessment and independent verification of environmental performance is included.
- fourth, newer, more progressive, codes place a greater emphasis on public reporting of environmental information. They are moving to greater transparency.
- fifth, community consultation and partnership are emphasised.
- sixth, a culture of environmental responsibility is encouraged through activities such as environmental management systems and staff training, rather than focusing solely on concrete performance issues like emissions and materials use.
- seventh, compliance with relevant legislation is the minimum starting point, with the focus on continuous improvement and best practice.
- eighth, corporate standards are applied on a world-wide basis.
- ninth, they specify how implementation of the policy is to be monitored.

Building on these approaches, the following set of illustrative principles has been developed by the author to indicate the main areas where progressive corporate codes are making commitments. This is a synthesis of issues dealt with in different codes, and all the elements listed here are most probably not

¹⁶ See <http://www.wbcsd.org> for a summary of the “Corporate Social Responsibility Stakeholder Dialogue Session” held in the Netherlands on September 6-8, 1998; the environmental and social ledgers, and other information on the CSR project.

found in any one single code. Broader codes such as the OECD Guidelines for Multinational Enterprises contain elements not specifically directed at the environment but covering issues of importance to environmental management. For example, the OECD Guidelines cover issues such as the promotion of technology diffusion and public openness in chapters of more general scope.

Best Practice Principles for Environmentally Responsible Corporate Behaviour

Sustainable development

Enterprises should establish world-wide policies on sustainable development.

Integrated environmental management -- a corporate priority

Enterprises should recognise environmental management as among the highest corporate priorities and as a key determinant of sustainable development. They are encouraged to implement recognised environmental management systems, such as ISO 14000 and EMAS. Environmental and social factors should be integrated into all strategies, decisions and activities.

Corporate-wide environmental policies and practices

Enterprises should apply the same corporate-wide environmental policies across their international operations. Particular environmental practices and performance standards should be adapted to suit the local environment, but should reflect the higher of home country or international best practice as concerns the management of harmful substances and wherever else this is practicable.

Environmental impact assessment

Enterprises should assess and take into account the full environmental impact of activities or projects prior to their commencement. Monitoring and assessment should be ongoing.

Sustainable use of natural resources and cleaner production

Enterprises should use energy and materials in an efficient manner and conserve non-renewable natural resources and biodiversity. They should minimise the generation of wastes in production processes and emissions to the environment. The objective should be pollution and waste avoidance rather than clean-up. Measurable targets should be set, and performance measured against them regularly.

Accident prevention and emergency preparedness

Enterprises should take all possible action to prevent accidents which cause health or environmental damage, and should develop emergency contingency plans in conjunction with relevant authorities and communities, recognising potential transboundary impacts.

Life cycle approach to products and services

Enterprises should develop and provide products and services that have no undue environmental impact and are safe in their intended use, that are efficient in their consumption of energy and natural resources, and that can be (preferably) recycled or re-used, or (at least) disposed of safely.

Precautionary principle

Enterprises should act to prevent serious or irreversible environmental degradation even in the face of scientific uncertainty.

Research

Enterprises should conduct or support research on the environmental impacts of raw materials, products, processes, emissions and wastes associated with the enterprise and on ways to minimise adverse environmental effects.

Environmental education and training

Enterprises should educate, train and motivate employees to conduct their activities in an environmentally responsible manner.

Technology diffusion

Enterprises should contribute to the diffusion of environmentally sound goods, services and technologies throughout the private and public sectors, particularly in developing countries.

Supply chain management

Enterprises should encourage and assist their suppliers and customers to adopt best environmental practices and to conform to these Guidelines.

Multilateral environmental agreements

Enterprises should comply with the requirements of multilateral environmental agreements and do their best to move toward targets and objectives as quickly as possible.

Contribution to public policy

Enterprises should contribute to the development of sound environmental policy and to activities in industry and the community that contribute to increased environmental protection and awareness.

Environmental reporting and auditing

Enterprises should conduct environmental audits to measure the environmental impact of their activities and make this information publicly available through annual company environmental reports, through providing information for toxic release registers and through information dissemination to employees, shareholders, directors, the authorities and the public.

Public openness, partnership and dialogue

Enterprises should foster openness, partnership and dialogue with employees and the public, anticipating and responding to their concerns about the potential hazards and impacts of operations, products, services or wastes, including those of transboundary or global significance.

Monitoring implementation of these principles

Enterprises should construct methods to ensure these principles are implemented and should make regular assessments of their performance against them.

The following table provides some examples of existing environmental statements that relate to the best practice principles set out above. This is done to illustrate that precedents exist for these principles. Text that has been reproduced above or in the annexes, namely Agenda 21 provisions, the ICC Business Charter and CERES, is referred to by paragraph, and other examples are set out in full. A legend for these other codes is at the bottom of this table.

Table 2: Examples from Existing Codes Illustrating Best Practice Principles

| |
|---|
| <p>1. Sustainable development:</p> <p>Agenda 21 (30.22)</p> <p>Australian Minerals Industry Code, Principle 1</p> |
| <p>2. Environmental management and integrated decision-making:</p> <p>ICC Principles 1 and 2;</p> <p>Agenda 21, 30.3:</p> <p>CERES Principle 9;</p> <p>Australian Minerals Industry Code, Principle 5</p> <p>“Make environmental management a high corporate priority and the integration of environmental policies, programmes and practices an essential element of management.” <i>ICME</i>.</p> |
| <p>3. Corporate-wide environmental policies and practices</p> <p>Agenda 21, 30.22, 19.52d and 20.29;</p> <p>ICC Principle 3;</p> <p>“The code encompasses member country operations both inside and outside Canada.” <i>Responsible Care, CCPA</i>.</p> <p>“Make environmental protection a priority at overseas sites and, as a minimum requirement, abide by the environmental standards of the host country. Apply Japanese standards concerning the management of harmful substances.” <i>Keidanren</i>.</p> |

4. Environmental impact assessment

“Conduct a full environmental assessment before starting overseas business operations. After the start of activities, try to collect data, and if necessary, conduct an assessment”. *Keidanren*.

“Conduct regular environmental reviews or assessments and act on the results”, *ICME*

5. Resource use, cleaner production and performance targets

Agenda 21, 30.6, 30.12, 20.18b,

CERES Principles 1, 2, 3 and 4.

Australian Minerals Code, Principle 6.

“To commit to reduce overall emission and waste generation; To economically develop and produce natural resources and to conserve those resources by using energy efficiently.” *American Petroleum Industry*.

6. Emergency preparedness

Agenda 21, 19.49h;

OECD, 8.3e;

ICC Principle 12;

CERES Principle 5;

“Each member company research and development, manufacturing, distribution and waste management site shall have an active community awareness and emergency response programme.” *Responsible Care, CCPA*.

7. Life cycle approach

Agenda 21, 30.26

CERES Principle 6

“Encourage product design and uses that promote the recyclability and the recycling of metal products.” *ICME*.

8. Precautionary principle

“We support the precautionary approach to environmental management, which strives to anticipate and prevent potential environmental degradation.” *UNEP*.

9. Research

Agenda 21, 30.25

“To make safety, health and environmental considerations a priority in our planning, and our development of new products and processes. To extend knowledge by conducting or supporting research on the safety, health and environmental effects of our raw materials, products, processes and waste materials.” *American Petroleum Institute*.

“Support research to expand scientific knowledge and develop improved technologies to protect the environment.” *ICME*.

10. Environmental education and training

OECD

ICC Principle 4;

“Provide adequate resources, staff, and requisite training so that employees at all levels are able to fulfil their environmental responsibilities.” *ICME*.

11. Technology diffusion

OECD, Chapter 9.

Agenda 21, 34.27, 30.22

“Promote the international transfer of technologies that mitigate adverse environmental effects, and use technologies and practices which take due account of local cultures and customs and economic and environmental needs.” *ICME*.

“Confer fully with the parties concerned at the operational site and co-operate with them in the transfer and local application of environment-related Japanese technologies and know-how.” *Keidanren*.

12. Supply chain management

Agenda 21, 30.12;

ICC Principle 11;

“We will seek to form business relations with suppliers and sub-contractors who follow similarly high environmental standards.” *UNEP Statement by Financial Institutions on the Environment and Sustainable Development*.

13. Multilateral environmental agreements

“Companies shall play an active role when the private sector’s help is sought to implement international environmental measures, including work to solve the problems of poverty and overpopulation in developing countries.” *Keidanren*.

“Comply with all international Conventions in relation to the environment.” *Pacific Asia Travel Association*.

14. Contribution to public policy

ICC Principle 14;

“Participate with Governments and others in creating responsible laws, regulations and standards to safeguard the community, work-place and environment.” *Responsible Care, CMA*.

“Encourage relevant authorities to identify areas worthy of conservation and to determine the level of development if any which would ensure those areas are conserved.” *Pacific Asia Travel Association*.

15. Environmental reporting

Agenda 21, 30.10b, 20.22a,

CERES Principle 10.

Australian Minerals Industry Code, principle 9.

“Develop an inventory of significant releases to air, water, and land; identify their sources, and evaluate their impact on human health and the environment.” *American Petroleum Institute*.

“Provide the local community with information on environmental measures on a regular basis.” *Keidanren*.

16. Public openness and partnership

Agenda 21, 30.26; 20.14f

CERES Principle 8.

“To recognise and respond to community concerns about our raw materials, products and operations.” *American Petroleum Institute*.

“To co-operate with local organisations in the vicinity of operational installations as a good neighbour to the local community.” *International Union of Producers and Distributors of Electrical Energy*.

“Be sensitive and responsive to community concerns about manufacturing operations.” *Responsible Care, CCPA*.

Australian Minerals Industry Code, Principle 3.

“Recognise local communities as stakeholders and engage with them in an effective process of consultation and communication.” *ICME*.

Legend:

- American Petroleum Institute, *Environmental, Health and Safety Mission and Guiding Principles*.
- CCPA, Canadian Chemical Producers Association, *Responsible Care*[®].
- CMA, Chemical Manufacturers Association, *Responsible Care*[®].
- ICME, International Council on Metals and the Environment, *Environmental Charter*.
- International Union of Producers and Distributors of Electrical Energy; *Statement and Code of Conduct on Environmental Policy*.
- *Keidanren*. (Japan Federation of Economic Organisations), *Ten-Point Environmental Guidelines for Japanese Enterprises Operating Abroad*.
- OECD, *Guidelines for Multinational Enterprises*.
- Pacific Asia Travel Association, *Code for Environmentally Responsible Tourism*.
- UNEP, *Statement by Financial Institutions on the Environment and Sustainable Development*.

(a) Implementation and Enforcement

The most impressive words in the world will not lead to anything without implementation. Even implementation within an enterprise will not yield the desired public recognition if there is no mechanism to monitor, assess and report on this implementation, preferably via a third-party verification process.

In terms of implementation mechanisms, as noted above, the CERES principles require externally audited regular reports on how a signatory is meeting the principles. This is a substantial commitment to performance measurement and public accountability. Similarly, the 1996 Australian Minerals Industry Code for Environmental Management stipulates that signatories should produce a public report within two years of signature of both the enterprise's environmental performance and its implementation of the Code. This report is to be subjected to an independent auditing process.

Responsible Care illustrates the evolution of efforts to monitor and assess implementation of voluntary approaches. Initially Responsible Care entailed a self-assessment procedure. The industry association merely provided self-assessment forms for participating companies to complete themselves. This was already relatively advanced in terms of voluntary codes of conduct, but still fell short of the overall goal of demonstrating improved environmental performance. In recent years verification procedures have come into being in some Responsible Care programmes such as the US and Canada. Now the system envisages a small verification team comprised of industry peers and community representatives to verify that the ethic, systems and practices which the company claims are in place are indeed in place. Implementation of this system is still in its infancy.

These are examples of current best practice in follow-up procedures for assessing how well signatories are implementing code commitments. However, requiring signatories to report on implementation progress does not of itself ensure the credibility and effectiveness of a code. Usually there are no agreed indicators of how to assess the level of implementation of code commitments.

Furthermore, there are usually no ultimate sanctions or institutionalised forms of peer pressure to deal with serious cases of non-compliance and to encourage better implementation and environmental performance. Industry associations which administer codes, such as Responsible Care, do not engage in policing or punishing non-performers. They are reluctant to exert significant peer pressure or publicly expose shortcomings. Their mission is simultaneously to promote the environmental image of the industry, fight off governmental regulation, and promote Responsible Care. Some commentators have argued that there is an irresolvable internal conflict in this situation where membership of the code of conduct is a prerequisite for membership of the industry association. An industry association needs to speak and work for all its members, not just the progressive leaders, so it will not want to criticise laggards and will tend to adopt a lowest common denominator approach¹⁷.

If codes are to play a role in improving corporate environmental management and performance, and are to be seen as credible and effective by the public, there will still need to be more focus on the monitoring of code implementation and environmental performance assessment.

(b) *Corporate Environmental Reporting*

As noted above, it is in the area of corporate environmental reporting that the most progress is probably to be made in terms of making voluntary approaches really work. Corporate environmental reporting can be a powerful mechanism for both improving environmental performance and at the same time getting public acceptance and recognition that this is actually happening. Performance measurement and information disclosure are a concrete demonstration that a company is taking its environmental challenges seriously. It is also the basis for setting targets for how performance will be improved, and allowing for this to be monitored publicly.

¹⁷ Neil Gunningham, 1999: "Environment, Self-Regulation and the Chemical Industry: Assessing Responsible Care". Australian Centre for Environmental Law, Australian National University.

Third-party external verification of corporate environmental reports is a key element of best practice. It takes a great change in corporate culture to be able to compile, have externally verified and disclose environmental information that can be used by environmental groups and regulators to evaluate a company's environmental performance. It is also a complex and expensive undertaking for large diversified multinationals. Royal Dutch/Shell estimated that the cost of undertaking an external verification of its environmental data cost was in the order of US\$2 million¹⁸. There is no doubt, however, that this action lends a large degree of credibility to the company's environmental efforts, and also reveals a lot of information to the company itself on how its environmental information is compiled.

Setting ambitious but realistic targets for improvement in an enterprise's environmental performance is also a key element of best practice in this area. While a few companies, such as 3M, have been doing this for many years now, the vast majority have not. For most companies, learning to set and meet voluntary, measurable targets requires a leap from a feeling of vulnerability on environmental matters to a culture of constructive engagement with the community.

Engagement with the community is in itself another key element of best practice in this area. Constructive dialogue with the local community and environmental groups can help a company understand how stakeholders perceive environmental issues, which may not be as the company had expected. Consultation and dialogue allows for improved understanding from all sides, and a joint approach to issues such as performance targets and monitoring. Process issues such as consultation and community input to performance targets are probably more important to stakeholders than many corporate environmental managers realise.

UNEP and SustainAbility attached so much importance to this issue that they titled their 1997 Benchmark Survey of company environmental reporting "Engaging Stakeholders". This report is essential reading for anyone interested in companies' efforts in the field of environmental reporting. The report identifies ten transitions that typify moves to best practice in corporate environmental reporting¹⁹. They are reproduced below:

¹⁸ Royal Dutch/Shell Group of Companies Health, Safety and Environment Report 1998, p.15.

¹⁹ "Engaging Stakeholders: The 1997 Benchmark Survey – The Third International Progress Report on Company Environmental Reporting". Report prepared by SustainAbility/UNEP. 1997: p.5.

THE TEN TRANSITIONS

| Established Focus? | Emerging Focus |
|--|---|
| 1. One-way passive communication? | Multi-way, active dialogue |
| 2. Verification as option? | Verification as standard |
| 3. Single company progress reports? | Benchmarkability |
| 4. Management systems? | Life cycles, business design, strategy |
| 5. Inputs and outputs? | Impacts and outcomes |
| 6. Ad-hoc operating standards? | Global operating standards |
| 7. Public relations? | Corporate governance |
| 8. Voluntary reporting? | Mandatory Reporting |
| 9. Company determines boundaries? | Boundaries set by stakeholder dialogue |
| 10. Environmental performance? | Triple Bottom Line Performance |

The reports' recommendations for companies, industry federations and governments are as follows²⁰:

Companies:

- Account for the triple bottom line of sustainable development
- Focus on real issues, impacts and priorities
- Develop SMART (specific, measurable, attainable, relevant and trackable) targets and verify them
- Integrate your reporting
- Link your corporate environmental report to your annual report
- Focus on financial market users
- Quantify and monetise
- Communicate, communicate, communicate
- Use the Internet but do not go paperless

Industry federations:

- Help develop -- and use -- sustainability indicators
- Engage -- and re-engage -- stakeholders

Governments:

- Review the need for new mandatory reporting requirements.

The SustainAbility/UNEP report builds on earlier work also done jointly by these organisations in 1994 (see footnote 13). The 1994 report set out 50 reporting ingredients which, it considers, make up a state-of-the-art company environmental report. The subsequent benchmark surveys then assess various company reports against these reporting ingredients.

Various other efforts are also underway to attempt to provide guidance and some degree of systematic approach to corporate environmental reporting. The CERES Global Reporting Initiative has been noted. Some national versions of Responsible Care have adopted reporting guidelines, for example the European Chemical Industry Council. The Public Environmental Reporting Initiative (PERI) is another example. PERI was launched in 1993 by a group of nine leading North American companies. Its reporting guidelines set out nine components for comprehensive reporting on environmental performance: company profile, environmental policy, environmental management, environmental releases, environmental risk management, environmental compliance, product stewardship, employee recognition and stakeholder involvement.

²⁰ "Engaging Stakeholders: The 1997 Benchmark Survey – The Third International Progress Report on Company Environmental Reporting". Report prepared by SustainAbility/UNEP. 1997: p.4.

Another attempt at promoting and guiding environmental reporting is the Global Environmental Management Initiative (GEMI). GEMI has produced an Environmental Self-Assessment Programme (ESAP) designed to allow companies to evaluate systematically their performance for each of the 16 ICC Business Charter principles against four compliance levels (compliance, systems development, integration and total quality). These self-assessments are not, however, designed to be made public, and are more about environmental management systems than environmental performance indicators and targets²¹.

4. Conclusions

The environmental impact of foreign direct investment is bound to continue to increase in public importance as investment increases, environmental concern increases, and information on environmental issues is so rapidly transmitted around the globe through the Internet. In the absence of international regulation, voluntary approaches are being relied upon by the private sector for various internal management and external relations reasons, and are consequently being increasingly scrutinised by the public and the environmental community.

The necessarily limited survey undertaken in this paper of a very large field nevertheless reveals some interesting trends. Increasing numbers of corporations and industry associations are devoting efforts to developing and publicising voluntary environmental policy statements, guidelines or codes. The most progressive of them pay attention to:

- sustainable development, not just environmental performance;
- stakeholder participation;
- establishing implementation mechanisms and monitoring and reporting on the implementation of the codes;
- setting quantifiable environmental performance indicators and setting measurable targets for improved environmental performance;
- moving beyond compliance to best practice and to greater transparency of environmental information; and
- integrating environmental and social factors into the central structures and cultures of their organisations.

At the same time, environmental policies and management systems are being considered by the most progressive companies as a necessary, but not sufficient, basis for best practice environmental management. Continuous, measurable improvement in actual environmental outcomes is increasingly recognised as necessary to gain the trust of stakeholders, including shareholders and financiers. Corporate environmental reporting is a mechanism both for implementing policy commitments to transparency, as stated in environmental codes, and for setting ambitious but achievable performance targets. These efforts will be more successful the more that stakeholders are engaged in the process of setting, monitoring and continually improving these performance objectives. External verification is a crucial factor in making these voluntary efforts credible and reliable.

²¹ "Company Environmental Reporting – A Measure of the Progress of Business and Industry Towards Sustainable Development". UNEP Technical Report No. 24. 1994: p.89.

Future efforts are likely to focus on better and more widespread external verification, and harmonisation of reporting and verification systems. These efforts, if taken seriously by a large enough share of international businesses, should gradually work to overcome the latent distrust that the public and environmental groups have of voluntary approaches. Codes of conduct without mechanisms to monitor implementation will not be very successful in gaining outside respect, even if they do have a beneficial effect on changing the internal culture of organisations. Inter-governmental organisations engaged in developing voluntary codes of conduct, such as the OECD Guidelines for Multinational Enterprises, need to strengthen their efforts in engaging the broader community, including environmental NGOs, in both the continued development and implementation of these codes. Process issues such as effective stakeholder involvement and dialogue, and external verification of data, are probably more important than many corporate environmental practitioners realise.

ANNEX 1
AGENDA 21, CHAPTER 30

Strengthening the Role of Business and Industry

Introduction

Business and industry, including transnational corporations, play a crucial role in the social and economic development of a country. A stable policy regime enables and encourages business and industry to operate responsibly and efficiently and to implement longer-term policies. Increasing prosperity, a major goal of the development process, is contributed primarily by the activities of business and industry. Business enterprises, large and small, formal and informal, provide major trading, employment and livelihood opportunities. Business opportunities available to women are contributing towards their professional development, strengthening their economic role and transforming social systems. Business and industry, including transnational corporations, and their representative organisations should be full participants in the implementation and evaluation of activities related to Agenda 21.

Through more efficient production processes, preventive strategies, cleaner production technologies and procedures throughout the product life cycle, hence minimising or avoiding wastes, the policies and operations of business and industry, including transnational corporations, can play a major role in reducing impacts on resource use and the environment. Technological innovations, development, applications, transfer and the more comprehensive aspects of partnership and co-operation are to a very large extent within the province of business and industry.

Business and industry, including transnational corporations, should recognise environmental management as among the highest corporate priorities and as a key determinant to sustainable development. Some enlightened leaders of enterprises are already implementing "responsible care" and product stewardship policies and programmes, fostering openness and dialogue with employees and the public and carrying out environmental audits and assessments of compliance. These leaders in business and industry, including transnational corporations, are increasingly taking voluntary initiatives, promoting and implementing self-regulations and greater responsibilities in ensuring their activities have minimal impacts on human health and the environment. The regulatory regimes introduced in many countries and the growing consciousness of consumers and the general public and enlightened leaders of business and industry, including transnational corporations, have all contributed to this. A positive contribution of business and industry, including transnational corporations, to sustainable development can increasingly be achieved by using economic instruments such as free market mechanisms in which the prices of goods and services should increasingly reflect the environmental costs of their input, production, use, recycling and disposal subject to country-specific conditions.

The improvement of production systems through technologies and processes that utilise resources more efficiently and at the same time produce less wastes - achieving more with less - is an important pathway towards sustainability for business and industry. Similarly, facilitating and encouraging

inventiveness, competitiveness and voluntary initiatives are necessary for stimulating more varied, efficient and effective options. To address these major requirements and strengthen further the role of business and industry, including transnational corporations, the following two programmes are proposed.

Programme Areas

A. *Promoting Cleaner Production*

Basis for action

There is increasing recognition that production, technology and management that use resources inefficiently form residues that are not reused, discharge wastes that have adverse impacts on human health and the environment and manufacture products that when used have further impacts and are difficult to recycle, need to be replaced with technologies, good engineering and management practices and know-how that would minimise waste throughout the product life cycle. The concept of cleaner production implies striving for optimal efficiencies at every stage of the product life cycle. A result would be the improvement of the overall competitiveness of the enterprise. The need for a transition towards cleaner production policies was recognised at the UNIDO-organised ministerial-level Conference on Ecologically Sustainable Industrial Development, held at Copenhagen in October 1991. 1/

Objectives

Governments, business and industry, including transnational corporations, should aim to increase the efficiency of resource utilisation, including increasing the reuse and recycling of residues, and to reduce the quantity of waste discharge per unit of economic output.

Activities

Governments, business and industry, including transnational corporations, should strengthen partnerships to implement the principles and criteria for sustainable development.

Governments should identify and implement an appropriate mix of economic instruments and normative measures such as laws, legislation and standards, in consultation with business and industry, including transnational corporations, that will promote the use of cleaner production, with special consideration for small and medium-sized enterprises. Voluntary private initiatives should also be encouraged.

Governments, business and industry, including transnational corporations, academia and international organisations, should work towards the development and implementation of concepts and methodologies for the internalisation of environmental costs into accounting and pricing mechanisms.

Business and industry, including transnational corporations, should be encouraged:

- (a) To report annually on their environmental records, as well as on their use of energy and natural resources;

- (b) To adopt and report on the implementation of codes of conduct promoting the best environmental practice, such as the Business Charter on Sustainable Development of the International Chamber of Commerce/(ICC) and the chemical industry's responsible care initiative.

Governments should promote technological and know-how co-operation between enterprises, encompassing identification, assessment, research and development, management marketing and application of cleaner production.

Industry should incorporate cleaner production policies in its operations and investments, taking also into account its influence on suppliers and consumers.

Industry and business associations should co-operate with workers and trade unions to continuously improve the knowledge and skills for implementing sustainable development operations.

Industry and business associations should encourage individual companies to undertake programmes for improved environmental awareness and responsibility at all levels to make these enterprises dedicated to the task of improving environmental performance based on internationally accepted management practices.

International organisations should increase education, training and awareness activities relating to cleaner production, in collaboration with industry, academia and relevant national and local authorities.

International and non-governmental organisations, including trade and scientific associations, should strengthen cleaner production information dissemination by expanding existing databases, such as the UNEP International Cleaner Production Clearing House (ICPIC), the UNIDO Industrial and Technological Information Bank (INTIB) and the ICC International Environment Bureau/(IEB), and should forge networking of national and international information systems.

B. Promoting responsible entrepreneurship

Basis for action

Entrepreneurship is one of the most important driving forces for innovations, increasing market efficiencies and responding to challenges and opportunities. Small and medium-sized entrepreneurs, in particular, play a very important role in the social and economic development of a country. Often, they are the major means for rural development, increasing off-farm employment and providing the transitional means for improving the livelihoods of women. Responsible entrepreneurship can play a major role in improving the efficiency of resource use, reducing risks and hazards, minimising wastes and safeguarding environmental qualities.

Objectives

The following objectives are proposed:

- (a) To encourage the concept of stewardship in the management and utilisation of natural resources by entrepreneurs;

- (b) To increase the number of entrepreneurs engaged in enterprises that subscribe to and implement sustainable development policies.

Activities

Governments should encourage the establishment and operations of sustainably managed enterprises. The mix would include regulatory measures, economic incentives and streamlining of administrative procedures to assure maximum efficiency in dealing with applications for approval in order to facilitate investment decisions, advice and assistance with information, infrastructural support and stewardship responsibilities.

Governments should encourage, in co-operation with the private sector, the establishment of venture capital funds for sustainable development projects and programmes.

In collaboration with business, industry, academia and international organisations, Governments should support training in the environmental aspects of enterprise management. Attention should also be directed towards apprenticeship schemes for youth.

Business and industry, including transnational corporations, should be encouraged to establish world-wide corporate policies on sustainable development, arrange for environmentally sound technologies to be available to affiliates owned substantially by their parent company in developing countries without extra external charges, encourage overseas affiliates to modify procedures in order to reflect local ecological conditions and share experiences with local authorities, national Governments and international organisations.

Large business and industry, including transnational corporations, should consider establishing partnership schemes with small and medium-sized enterprises to help facilitate the exchange of experience in managerial skills, market development and technological know-how, where appropriate, with the assistance of international organisations.

Business and industry should establish national councils for sustainable development and help promote entrepreneurship in the formal and informal sectors. The inclusion of women entrepreneurs should be facilitated.

Business and industry, including transnational corporations, should increase research and development of environmentally sound technologies and environmental management systems, in collaboration with academia and the scientific/engineering establishments, drawing upon indigenous knowledge, where appropriate.

Business and industry, including transnational corporations, should ensure responsible and ethical management of products and processes from the point of view of health, safety and environmental aspects. Towards this end, business and industry should increase self-regulation, guided by appropriate codes, charters and initiatives integrated into all elements of business planning and decision-making, and fostering openness and dialogue with employees and the public.

Multilateral and bilateral financial aid institutions should continue to encourage and support small- and medium-scale entrepreneurs engaged in sustainable development activities.

United Nations organisations and agencies should improve mechanisms for business and industry inputs, policy and strategy formulation processes, to ensure that environmental aspects are strengthened in foreign investment.

International organisations should increase support for research and development on improving the technological and managerial requirements for sustainable development, in particular for small and medium-sized enterprises in developing countries.

Means of Implementation

Financing and cost evaluation

The activities included under this programme area are mostly changes in the orientation of existing activities and additional costs are not expected to be significant. The cost of activities by Governments and international organisations are already included in other programme areas.

ANNEX 2
CHAPTER 8 OF THE OECD GUIDELINES FOR MULTINATIONAL ENTERPRISES

Environmental Protection

Enterprises should, within the framework of laws, regulations and administrative practices in the countries in which they operate, and recalling the provisions of paragraph 9 of the Introduction to the Guidelines that, *inter alia*, multinational and domestic enterprises are subject to the same expectations in respect of their conduct whenever the Guidelines are relevant to both, take due account of the need to protect the environment and avoid creating environmentally related health problems. In particular, enterprises, whether multinational or domestic, should:

- 1) Assess, and take into account in decision making, foreseeable environmental and environmentally related health consequences of their activities, including siting decisions, impact on indigenous natural resources and foreseeable environmental and environmentally related health risks of products as well as from the generation, transport and disposal of waste;
- 2) Co-operate with competent authorities, *inter alia*, by providing adequate and timely information regarding the potential impacts on the environment and environmentally related health aspects of all their activities and by providing the relevant expertise available in the enterprise as a whole;
- 3) Take appropriate measures in their operations to minimise the risk of accidents and damage to health and the environment, and to co-operate in mitigating adverse effects, in particular:
 - a) by selecting and adopting those technologies and practices which are compatible with these objectives;
 - b) by introducing a system of environmental protection at the level of the enterprise as a whole including, where appropriate, the use of environmental auditing;
 - c) by enabling their component entities to be adequately equipped, especially by providing them with adequate knowledge and assistance;
 - d) by implementing education and training programmes for their employees;
 - e) by preparing contingency plans; and
 - f) by supporting, in an appropriate manner, public information and community awareness programmes.

ANNEX 3
**THE INTERNATIONAL CHAMBER OF COMMERCE'S BUSINESS CHARTER FOR
SUSTAINABLE DEVELOPMENT**

Principles for Environmental Management

Foreword

There is widespread recognition today that environmental protection must be among the highest priorities of every business.

In its milestone 1987 report, "Our Common Future," the World Commission on Environment and Development (Brundtland Commission) emphasised the importance of environmental protection to the pursuit of sustainable development.

To help business around the world improve its environmental performance, the International Chamber of Commerce created this Business Charter for Sustainable Development. It comprises sixteen Principles for environmental management which, for business, is a vitally important aspect of sustainable development. This Charter assists enterprises in fulfilling their commitment to environmental stewardship in a comprehensive fashion, in line with national and international guidelines and standards for environmental management. It was formally launched in April 1991 at the Second World Industry Conference on Environmental Management in Rotterdam, and continues to be widely applied and recognised around the world.

Introduction

Sustainable development involves meeting the needs of the present without compromising the ability of future generations to meet their own needs. Economic growth provides the conditions in which protection of the environment can best be achieved, and environmental protection, in balance with other human goals, is necessary to achieve growth that is sustainable.

In turn, versatile, dynamic, responsive and profitable businesses are required as the driving force for sustainable economic development and for providing the managerial, technical and financial resources to contribute to the resolution of environmental challenges. Market economies, characterised by entrepreneurial initiatives, are essential to achieve this.

Business thus shares the view that there should be a common goal, not a conflict, between economic development and environmental protection, both now and for future generations.

Making market forces work in this way to protect and improve the quality of the environment -- with the help of standards such as ISO 14000, and judicious use of economic instruments in a harmonious regulatory framework -- is an on-going challenge that the world faces in entering the 21st century.

This challenge was recognised by the nations of the world at the 1992 United Nations Conference on Environment and Development, which called on the co-operation of business in tackling it. To this end,

business leaders have launched initiatives in their individual enterprises as well as through sectoral and cross-sectoral associations.

In order that more businesses join this effort and that their environmental performance continues to improve, the International Chamber of Commerce continues to call upon enterprises and their associations to use the following Principles as a basis for pursuing such improvement and to express publicly their support for them.

Individual programmes to implement these Principles will reflect the wide diversity among enterprises in size and function.

The objective remains that the widest range of enterprises commit themselves to improving their environmental performance in accordance with these Principles, to having in place management practices to effect such improvement, to measuring their progress, and to reporting this progress as appropriate internally and externally.

Note: The term environment as used in this document also refers to environmentally related aspects of health, safety and product stewardship.

Principles

1. *Corporate priority*

To recognise environmental management as among the highest corporate priorities and as a key determinant to sustainable development; to establish policies, programmes and practices for conducting operations in an environmentally sound manner.

2. *Integrated management*

To integrate these policies, programmes and practices fully into each business as an essential element of management in all its functions.

3. *Process of improvement*

To continue to improve corporate policies, programmes and environmental performance, taking into account technical developments, scientific understanding, consumer needs and community expectations, with legal regulations as a starting point; and to apply the same environmental criteria internationally.

4. *Employee education*

To educate, train and motivate employees to conduct their activities in an environmentally responsible manner.

5. *Prior assessment*

To assess environmental impacts before starting a new activity or project and before decommissioning a facility or leaving a site.

6. *Products and services*

To develop and provide products or services that have no undue environmental impact and are safe in their intended use, that are efficient in their consumption of energy and natural resources, and that can be recycled, reused, or disposed of safely.

7. *Customer advice*

To advise, and where relevant educate, customers, distributors and the public in the safe use, transportation, storage and disposal of products provided; and to apply similar considerations to the provision of services.

8. *Facilities and operations*

To develop, design and operate facilities and conduct activities taking into consideration the efficient use of energy and materials, the sustainable use of renewable resources, the minimisation of adverse environmental impact and waste generation, and the safe and responsible disposal of residual wastes.

9. *Research*

To conduct or support research on the environmental impacts of raw materials, products, processes, emissions and wastes associated with the enterprise and on the means of minimising such adverse impacts.

10. *Precautionary approach*

To modify the manufacture, marketing or use of products or services or the conduct of activities, consistent with scientific and technical understanding, to prevent serious or irreversible environmental degradation.

11. *Contractors and suppliers*

To promote the adoption of these principles by contractors acting on behalf of the enterprise, encouraging and, where appropriate, requiring improvements in their practices to make them consistent with those of the enterprise; and to encourage the wider adoption of these principles by suppliers.

12. *Emergency preparedness*

To develop and maintain, where significant hazards exist, emergency preparedness plans in conjunction with the emergency services, relevant authorities and the local community, recognising potential transboundary impacts.

13. *Transfer of technology*

To contribute to the transfer of environmentally sound technology and management methods throughout the industrial and public sectors.

14. *Contributing to the common effort*

To contribute to the development of public policy and to business, governmental and intergovernmental programmes and educational initiatives that will enhance environmental awareness and protection.

15. *Openness to concerns*

To foster openness and dialogue with employees and the public, anticipating and responding to their concerns about the potential hazards and impacts of operations, products, wastes or services, including those of transboundary or global significance.

16. *Compliance and reporting*

To measure environmental performance; to conduct regular environmental audits and assessments of compliance with company requirements, legal requirements and these principles; and periodically to provide appropriate information to the Board of Directors, shareholders, employees, the authorities and the public.

Support for the Charter

The ICC undertakes to encourage member companies and others to express their support and implement the Charter and its Principles. A list of these companies can be obtained from ICC Headquarters. The ICC also publishes regularly a Charter bulletin which provides more specific information on the Charter's Principles and different interpretations possible - an attribute of the Charter that has been widely commended.

The first edition of Business Charter for Sustainable Development was adopted by the ICC Executive Board on 27 November 1990, and first published in April 1991. It was prepared and revised by the ICC Working Party for Sustainable Development. *Chairman:* Peter Scupholme (British Petroleum) *Vice-Chairman:* W. Ross Stevens III (Du Pont)

The ICC is indebted to numerous companies and business organisations for their input in preparing and revising the Charter.

The Business Charter for Sustainable Development provides a basic framework of reference for action by individual corporations and business organisations throughout the world. It has been recognised as a complement to environmental management systems. To this end, the ICC, the United Nations Environment Programme (UNEP) and the International Federation of Consulting Engineers (FIDIC) have developed a kit to help enterprises integrate environmental management systems in the daily management practices, a step consistent with the objectives set out in this Charter. The Business Charter has been published in over 20 languages, including all the official languages of the United Nations.

ANNEX 4

THE CERES PRINCIPALES

By adopting these Principles, we publicly affirm our belief that corporations have a responsibility for the environment, and must conduct all aspects of their business as responsible stewards of the environment by operating in a manner that protects the Earth. We believe that corporations must not compromise the ability of future generations to sustain themselves.

We will update our practices constantly in light of advances in technology and new understandings in health and environmental science. In collaboration with CERES, we will promote a dynamic process to ensure that the Principles are interpreted in a way that accommodates changing technologies and environmental realities. We intend to make consistent, measurable progress in implementing these Principles and to apply them to all aspects of our operations throughout the world.

Protection of the biosphere

We will reduce and make continual progress toward eliminating the release of any substance that may cause environmental damage to the air, water, or the earth or its inhabitants. We will safeguard all habitats affected by our operations and will protect open spaces and wilderness, while preserving biodiversity.

Sustainable use of natural resources

We will make sustainable use of renewable natural resources, such as water, soils and forests. We will conserve non-renewable natural resources through efficient use and careful planning.

Reduction and disposal of wastes

We will reduce and where possible eliminate waste through source reduction and recycling. All waste will be handled and disposed of through safe and responsible methods.

Energy conservation

We will conserve energy and improve the energy efficiency of our internal operations and of the goods and services we sell. We will make every effort to use environmentally safe and sustainable energy sources.

Risk reduction

We will strive to minimise the environmental, health and safety risks to our employees and the communities in which we operate through safe technologies, facilities and operating procedures, and by being prepared for emergencies.

Safe products and services

We will reduce and where possible eliminate the use, manufacture or sale of products and services that cause environmental damage or health or safety hazards. We will inform our customers of the environmental impacts of our products or services and try to correct unsafe use.

Environmental restoration

We will promptly and responsibly correct conditions we have caused that endanger health, safety or the environment. To the extent feasible, we will redress injuries we have caused to persons or damage we have caused to the environment and will restore the environment.

Informing the public

We will inform in a timely manner everyone who may be affected by conditions caused by our company that might endanger health, safety or the environment. We will regularly seek advice and counsel through dialogue with persons in communities near our facilities. We will not take any action against employees for reporting dangerous incidents or conditions to management or to appropriate authorities.

Management commitment

We will implement these Principles and sustain a process that ensures that the Board of Directors and Chief Executive Officer are fully informed about pertinent environmental issues and are fully responsible for environmental policy. In selecting our Board of Directors, we will consider demonstrated environmental commitment as a factor.

Audits and reports

We will conduct an annual self-evaluation of our progress in implementing these Principles. We will support the timely creation of generally accepted environmental audit procedures. We will annually complete the CERES Report, which will be made available to the public.

These Principles establish an environmental ethic with criteria by which investors and others can assess the environmental performance of companies. Companies that endorse these Principles pledge to go voluntarily beyond the requirements of the law. The terms may and might in Principles one and eight are not meant to encompass every imaginable consequence, no matter how remote. Rather, these Principles obligate endorsers to behave as prudent persons who are not governed by conflicting interests and who possess a strong commitment to environmental excellence and to human health and safety. These Principles are not intended to create new legal liabilities, expand existing rights or obligations, waive legal defences, or otherwise affect the legal position of any endorsing company, and are not intended to be used against an endorser in any legal proceeding for any purpose.

ANNEX 5
AUSTRALIAN MINERALS INDUSTRY CODE FOR ENVIRONMENTAL MANAGEMENT
December 1996

More than in any other way, the community judges the minerals industry by its environmental performance. Recognising the need to achieve environmental excellence and to be open and accountable to the community. Australia's minerals industry has developed a Code for Environmental Management. The Code has been strengthened by contributions from government and non-government organisations.

The Code is the centrepiece of a new commitment to respond to community concerns through consultation, demonstrated environmental performance, continual improvement and public reporting.

Adoption of the Code is voluntary and open to all minerals companies. Signatories will be required to demonstrate their commitment to environmental excellence and provide leadership to the minerals industry for the broad adoption of the Code. Irrespective of whether a company becomes a signatory, the Code provides a basis for improving environmental performance through progressive implementation of the Code's principles.

Effective environmental management within the minerals industry must take into account the physical, environmental, statutory, economic and social parameters relevant to each operation. Therefore, the Code provides a comprehensive framework for the development of effective systems and processes for each operation. It does not prescribe specific practices, standards or any particular local requirements as they cannot provide effective environmental management across diverse operations.

The Code does not set entry standards but requires signatories' commitment to continual improvement and public reporting of Code implementation and environmental performance. Signatories will progressively implement the Code's principles by putting in place systems and processes to achieve full implementation over time.

Signatories will apply the Code wherever they operate. The principles will guide signatories through each phase of mineral development, from exploration, through design and construction to mining, minerals processing, rehabilitation and decommissioning.

Signatories to the Code will:

- observe the policies, and respect the aspirations of State, Territory and sovereign governments relevant to mineral developments;
- facilitate community partnerships on environmental matters;
- report publicly on environmental performance and implementation of the Code.

The industry recognises that community, government and industry needs and expectations will change over time. The Code will continue to evolve with ongoing input from all stakeholders.

Statement of principles

Signatories to the Code are committed to excellence in environmental management through:

Sustainable development

Managing activities in a manner consistent with the principles of sustainable development such that economic, environmental and social considerations are integrated into decision making and management.

Environmentally responsible culture

Developing an environmentally responsible culture by demonstrating management commitment, implementing management systems, and providing the time and resources to educate and train employees and contractors.

Community partnership

Consulting the community on its concerns, aspirations and values regarding development and operational aspects of mineral projects, recognising that there are links between environmental, economic, social and cultural issues.

Risk management

Applying risk management techniques on a site-specific basis to achieve desirable environmental outcomes.

Integrated environmental management

Recognising environmental management as a corporate priority and integrating environmental management into all operations from exploration, through design and construction to mining, minerals processing, rehabilitation and decommissioning.

Performance targets

Setting environmental performance targets not necessarily limited to legislation, licence and permit requirements.

Continual improvement

Implementing management strategies to meet current and anticipated performance standards and regularly reviewing objectives in the light of changing needs and expectations.

Rehabilitation and decommissioning

Ensuring decommissioned sites are rehabilitated and left in a safe and stable condition, after taking into account beneficial uses of the site and surrounding land.

Reporting

Demonstrating commitment to the Code's principles by reporting the company's implementation of the Code and environmental performance to governments, the community and within the company.

Systems and processes

The systems and processes relevant to each Principle are:

Sustainable development

Managing activities in a manner consistent with the principles of sustainable development such that economic, environmental and social considerations are integrated into decision making and management.

- 1) Support activities to improve knowledge of the short- and long-term availability and use of mineral resources.
- 2) Promote reuse and recycling of mineral products and by-products to maximise their utility to current and future generations.
- 3) Pursue cleaner production through research, technological innovation, operational efficiencies and waste minimisation.
- 4) Recognise the maintenance of ecological and cultural heritage values as an important consideration in sustainable development.

Environmentally responsible culture

Developing an environmentally responsible culture by demonstrating management commitment, implementing management systems, and providing the time and resources to educate and train employees and contractors.

- 1) Develop, implement and communicate an environmental policy consistent with the Code.
- 2) Demonstrate management commitment through application of environmental management practices consistent with the Code.
- 3) Implement effective environmental education and training programmes for all employees and contractors.
- 4) Ensure that employees and contractors are provided with necessary company policies, goals, procedures, guidelines and practices for environmental and heritage protection.
- 5) Require employees and site contractors to comply with company practices and procedures.
- 6) Facilitate community education about the minerals industry and its environmental management.

Community partnership

Consulting the community on its concerns, aspirations and values regarding development and operational aspects of mineral projects, recognising that there are links between environmental, economic, social and cultural issues.

- 1) Identify directly and indirectly affected stakeholders, and their concerns.

- 2) Foster openness and dialogue with employees and the community, promote cross-cultural awareness, and specifically address concerns about environmental and social impacts.
- 3) Provide to the community technical information about potential effects of operations, products, waste and rehabilitation practices.
- 4) Establish community consultation relevant to each stage of operations.

Risk management

Applying risk management techniques on a site-specific basis to achieve desirable environmental outcomes.

- 1) Utilise environmental baseline studies as the basis for risk management.
- 2) Evaluate the risks of alternative project concepts, weighing the positive and negative consequences of the outcomes and provide opportunities for stakeholder participation.
- 3) Implement management strategies to mitigate environmental impacts of the preferred development option.
- 4) Adopt a proactive and cautious approach to reasonably foreseeable environmental risks.
- 5) Develop and implement contingency plans to address incidents and abnormal operating and environmental conditions.

Integrated environmental management

Recognising environmental management as a corporate priority and integrating environmental management into all operations from exploration, through design and construction to mining, minerals processing, rehabilitation and decommissioning.

- 1) Establish a management system which allocates management and employee responsibilities relevant to the organisation's activities and applicable legal requirements.
- 2) Address within an environmental management system:
 - applicable legal and regulatory requirements;
 - requirements under this Code and any other codes to which the company is a signatory;
 - company environmental policies, objectives and targets;
 - environmental management plans and procedures;
 - environmental monitoring procedures;
 - setting and testing of contingency and emergency response plans;
 - regular auditing of the environmental management system and environmental performance;

- reporting procedures.

Periodically review the environmental management system to ensure that it remains effective and relevant to the company's evolving needs and changing community values and expectations.

Performance targets

Setting environmental performance targets not necessarily limited to legislation, licence and permit requirements.

- 1) Identify legal and other requirements applicable to the environmental aspects of the organisation's activities, products or services.
- 2) Set internal performance targets and periodically assess achievements to reinforce policy commitments and to enable demonstration of continual improvement.
- 3) Ensure that legal requirements and internal performance targets are effectively communicated to the employees who are accountable for the relevant activities.

Continual improvement

Implementing management strategies to meet current and anticipated performance standards and regularly reviewing objectives in the light of changing needs and expectations.

- 1) Regularly review and update corporate policies, programmes, and environmental performance to correct any deficiencies.
- 2) Assess and rank environmental issues in order to concentrate efforts in priority areas and where maximum gains are achievable.
- 3) Undertake, participate in, or support research on priority issues and facilitate transfer of information on technical developments, scientific understanding, consumer needs and community expectations.

Rehabilitation and decommissioning ensuring decommissioned sites are rehabilitated and left in a safe and stable condition, after taking into account beneficial uses of the site and surrounding land.

- 1) Incorporate rehabilitation and decommissioning options in the conceptual design of operations at the feasibility stage.
- 2) Develop clearly-defined rehabilitation plans, monitor and review rehabilitation performance and progressively refine such plans.
- 3) Determine and account for rehabilitation and decommissioning costs and periodically review their adequacy during the life of the operation.
- 4) Establish a programme of progressive rehabilitation commensurate with the nature of the operation and the rate of disturbance.
- 5) Periodically review the rehabilitation and decommissioning strategies over the life of the operation to incorporate changing legislative requirements, public expectations and environmental and cultural heritage information.

- 6) Address issues and programmes related to long-term responsibility for land management in the final decommissioning plan.

Reporting

Demonstrating commitment to the Code's principles by reporting the company's implementation of the Code and environmental performance to governments, the community and within the company.

- 1) Implement regular reporting of environmental performance to all stakeholders, including the Board of Directors, shareholders, employees, authorities and the community.
- 2) Provide an annual public environmental report.
- 3) Reports should describe the company's processes for:
 - communicating environmental policy;
 - communicating environmental performance;
 - community consultation and responding to concerns;
 - Code implementation.
- 4) Reports should also include, but not be limited to:
 - organisation profile, environmental policies and objectives;
 - environmental management processes;
 - establishment of benchmarks against which continual improvement can be measured;
 - opportunities/progress in improvements;
 - prosecutions and associated significant environmental incidents;
 - performance in relation to regulatory requirements and internal targets;
 - environmental and heritage issues to be addressed and strategies to implement them.

Code implementation

Companies committing to the Code will be listed on a register maintained by the Code Secretariat. Initially, the Secretariat will be provided by the Minerals Council of Australia.

Eligibility

All mining and minerals processing companies are eligible to become Code signatories, provided they commit to its implementation. Membership of an industry association is not a prerequisite to becoming a

signatory. Similarly, being a signatory is not a prerequisite for association membership. State Minerals Councils, Chambers of Mines and other minerals industry associations may associate with the Code.

Signatory companies will use all reasonable endeavours to have the Code Principles applied to operations in which they hold a non-controlling interest.

Registration

Companies wishing to commit to the Code will advise the Code Secretariat by letter. Eligible companies will be added to the register which will be published and available for public inspection. Individual companies may choose to publicise their registration.

Performance review

Implementation of the Code will be evaluated by qualified, externally-accredited auditors from within the signatory company, or by accredited external auditors appointed by the company at least every three years.

Reporting

Signatories to the Code will produce annual public environmental reports in accordance with the Code's Reporting Principle. The first report is to be prepared within two years of registration.

The reports are expected to demonstrate the company's commitment to, and implementation of the Code and describe its performance in relation to the key Principles.

Companies are to make their annual environmental reports available to the public through their corporate and regional offices. Copies of each report, for public review, are to be lodged with the Code secretariat and in major libraries in jurisdictions within which the company operates.

Code review

The Code will be a living document and will continue to be refined and developed. Consultation with stakeholders will continue. The Code will be formally reviewed in 1999, when signatories will be invited to recommit to the Code.

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