GLOBAL
ENVIRONMENT
FACILITY

# ENGAGING THE PRIVATE SECTOR

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NOTE:

1. This Information Document, "Engaging the Private Sector" GEF/C.6/Inf.4, is submitted to the Council for comments. Council Members are invited to submit written comments on the document to the GEF Secretariat by November 30, 1995.

2. During the lunch break of the first day of the Council meeting, October 25, 1995, the Secretariat will host a workshop that is aimed at facilitating an informal discussion of the document among interested Council Members, Alternates, Advisors, Representatives, and other Observers.

3. Comments made during the discussion, as well as written comments, will be taken into account in preparing a revised document for Council consideration, with a view to approval, at its meeting in April/May 1996.

## GEF'S INTEREST IN THE PRIVATE SECTOR

1. From the start of the Global Environment Facility[1](GEF) there was recognition of the significant contributions the private sector could make to its successful operation. During the pilot phase, Implementing Agencies and project executing agencies gained certain experience with a variety of approaches to private sector participation in the GEF. In the process of examining numerous potential GEF private sector project concepts, business groups, companies, government representatives and NGO's were consulted, and several projects were initiated. Examples of pilot phase projects with a significant private sector involvement are presented in Annex A. They were managed through the World Bank Group's private sector affiliate, the International Finance Corporation (IFC), World Bank, United Nations Development Programme (UNDP), and the Interamerican Development Bank (IDB). For a more detailed description of two examples of pilot phase private sector projects under implementation by the IFC, see Annex B.

2. The importance of engaging the private sector in a substantial way was reaffirmed during the process of restructuring the GEF. The Instrument for the Establishment of the Restructured GEF lists the private sector among the various partners which the GEF is expected to engage (para 28): " .. The Implementing Agencies may make arrangements for GEF project preparation and execution by multilateral development banks, specialized agencies and programs of the United Nations, other international organizations, bilateral development agencies, national institutions non-governmental organizations, private sector entities and academic institutions, taking into account their comparative advantages in efficient and cost-effective project execution.. ." (emphasis added).

3. Particular responsibility is envisaged for the World Bank Group (including IFC): "The World Bank will draw upon its investment experience in eligible countries to .. mobilize private sector resources that are consistent with GEF objectives and national sustainable development strategies."[2]

4. There are a number of reasons why the GEF should actively seek to engage the private sector[3] in efforts to preserve the global environment. First, net private capital flows (foreign direct investment, portfolio equity flows, bond issues, and commercial bank loans) are now three times

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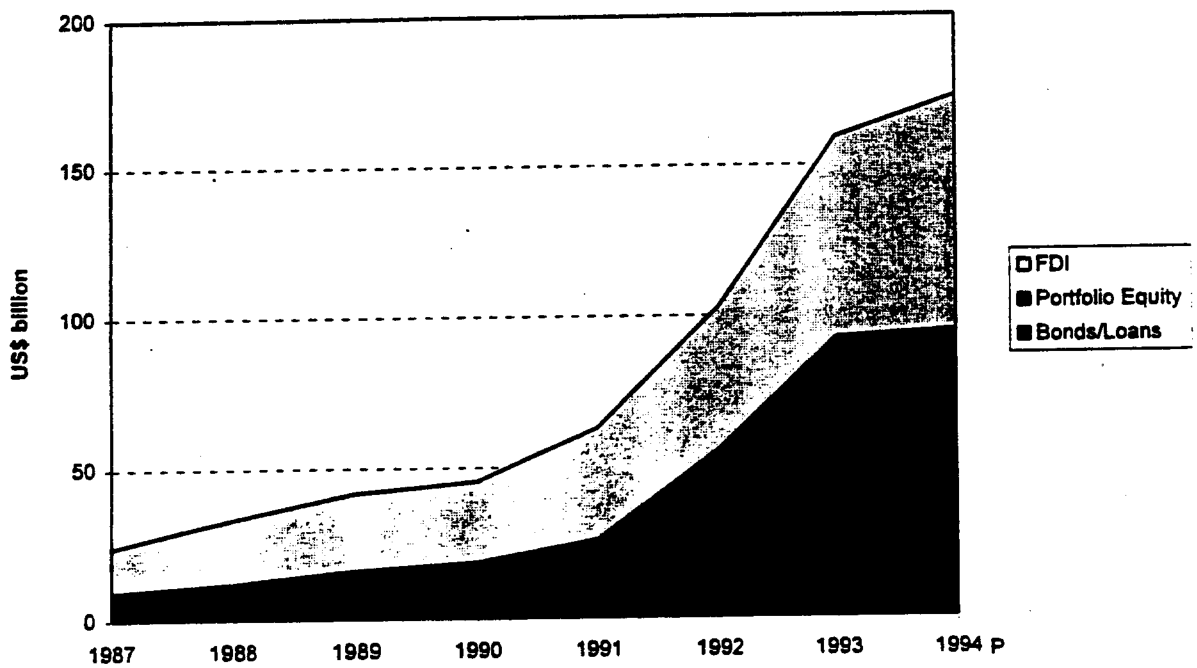
[1] Instrument for the Establishment of the Restructured Global Environment Facility, Washington, DC 1994, preamble (a). Article 2 prescribes the GEF's mission as "..a mechanism for international cooperation for the purpose of providing new and additional grant and concessional funding to meet agreed incremental costs of measures to achieve agreed global environmental benefits" in the focal areas of climate change, biodiversity, international waters and the atmospheric ozone layer.

[2] Instrument .. Annex D art. 10 (c)

[3] The private sector, for purposes of this paper, includes all types of non-government economic activities of a for-profit character, including all sizes of corporations, as well as business associations. In this context corporations include micro, small, and medium-sized enterprises, including individual and family-owned businesses. It is recognized that many NGO's are increasingly engaged in associations with companies or other ventures to undertake innovative private sector activities designed to address global environmental issues.

greater than official flows (ODA). As documented in Figure 1, of total net resource flows to developing countries of $233 billion in 1994, net private flows totaled $173 billion while ODA totaled about $60 billion. As recently as 1989, public and private flows were roughly equal. Further, overall ODA to GNP ratios among donor countries in 1994 dropped to 0.29%, their lowest level in more than 20 years[4].

**Figure 1 Net Private Capital Flows to Developing Countries, 1987-1994**



Source: World Bank, 1995

[4] Source: "Financial Flows and the Developing Countries", World Bank, August 1995.

5. With ODA levels largely stagnant or falling in both real and relative terms, the balance of economic activity in developing countries and economies in transition is likely to continue to shift further from public towards private sector investment. Turbulence in some emerging markets not withstanding, the trend of rising private investment seems likely to persist. Reasons include: economic liberalization in increasing numbers of countries and a renewed emphasis on private markets in provision of goods and services. In contrast public investment in developing countries is declining from historically already low levels[5]

6. The private sector is intimately linked to many of the factors affecting the global environment. Demand for power supply investments in developing countries has been estimated at $100 billion per year (50% of expected total infrastructure investment levels)[6]. In 1994 project finance on a commitment basis to developing countries totaled $22.6 billion of which nearly $6 billion was in the power sector. Similarly oil and gas development investment in developing countries is now variously estimated in the range of $50-100 billion per year[7]. The bulk of total investment is in the private sector, so is technology development and choice. Given the GEF's interest in global environment-friendly technologies[8], private sector GEF participation is key to the transfer of desired technologies and further development of commercial markets for such technologies. Such participation is also vital to enable GEF recipient countries - including the private sector within these countries - to fulfill any future obligations under the FCCC[9]. The private sector is also important to biodiversity-linked sectors such as forestry, agriculture and tourism.

7. The challenge for the GEF is to find effective modalities to influence ("leverage") these investment flows in ways that are beneficial to the global environment. Leveraging through the GEF's financing of a project's incremental costs may be of two kinds: financial leveraging (with respect to the recipient country) -- in case it causes a project to be financed that would not otherwise have occurred (or have occurred much later), or strategic leveraging (with respect to the global environment) -- in case it causes a project to be realized in a more global environment-friendly manner than previously envisaged.

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[5] Source: "Trends in Private Investment in Developing Countries 1994: Statistics for 1970-92", International Finance Corporation, 1994.

[6] Source: "Capital Expenditures for Electric Power in the Developing Countries in the 1990's", World Bank, February 1990.

[7] "Energy Transition in Developing Countries" World Bank 1983, and subsequent unpublished industry sources.

[8] Revised Draft GEF Operational Strategy, GEF/C.6/3, Washington DC, September 29, 1995

[9] The number of countries that had ratified the FCCC stood at 138 as of August 6, 1995.

**Strategy**

8. Over time it is expected that the national and global environmental impact of a private company's operations will be under scrutiny by national environmental and regulatory agencies. Global environmental policy regulations, however, present, not only potential regulatory constraint but also an important opportunity to participate in new business developments. The global environmental issues are also governed by international conventions, with compliance implications for countries that have ratified. Companies that successfully anticipate future environmental regulatory requirements will place themselves in an advantageous competitive position. However, even where promising business opportunities with global environmental benefits and new technologies nearing commercialization exist, private firms may still be reluctant to invest in such opportunities in developing countries and economies in transition. Consequently, an effective GEF leveraging strategy will have to focus on ways to help business to overcome such reluctance.

**Risk**

9. As prime users of natural resources private sector companies can be expected to have an interest in the condition of the country's natural resource base. For a number of them this interest extends itself to the global component, such as pollution of the atmosphere and the oceans, and the global stock of biodiversity. The fishing and timber industries, hydropower, pharmaceuticals, all depend greatly on global environmental conditions, to mention just a few examples. Other companies, such as those in the insurance industry, have a direct business interest in global environmental trends in climate change, international water pollution and the ozone layer.

10. Except in the case of a national regulatory regime that already prescribes certain legal environmental provisions[10], or of companies with a special business concern in the global environmental condition, business normally requires financial incentives to incur the incremental costs as well as risks inherent to undertaking projects (or project components) that benefit the global environment. In such financial calculations it will consider both the expected return and the uncertainty (risk) to which this return is perceived to be subjected, i.e. the risk-adjusted rate of return. New technologies that tend to benefit the global environment often face market barriers, especially in developing countries and economies in transition, with accelerated introduction dependent upon provision of financial incentives. Therefore, the companies' specific interest in the GEF would be to what extent the extra costs and risks inherent in a global environment-focused project - or project component - could be mitigated through GEF financing.

**Community Relations**

11. Businesses differ in the time horizon they choose in their approaches to environmental questions. Whether inspired by environmentalist belief or calculated business strategy, a number of

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[10] Typically environmental regulations are designed with enforcement through fines and penalties, thus also using the financial incentive to affect business behavior

industry leaders are following a far-sighted strategy vis-a-vis the environment. The supporting public relations campaigns of these companies aim to build their consumers, government, employees and community relations strategies on their programs for being responsible corporate citizen. Increasingly, global environmental aspects are being integrated into these strategies.

## GEF ENGAGEMENT OF THE PRIVATE SECTOR: ISSUES

12. Various types of risks and procedural issues need to be addressed to encourage greater private sector interest in completing GEF-sponsored projects in the GEF. The effectiveness of GEF's collaboration with the private sector will largely depend on how well it is able to develop mechanisms and procedures that help mitigate risks specific to certain types of investment which tend to benefit the global environment.

13. In this section, the issues that need to be addressed are discussed under four headings:

(a) operationalizing the GEF Council policy of incremental costs;

(b) financing modalities tailored to private sector and GEF needs;

(c) the need for a streamlined project approval process; and

(d) other GEF-specific considerations.

### Incremental Costs

14. Operational guidelines need to be developed which reconcile the integrity of the incremental cost concept with provision of GEF financing directly to private companies. The determination of the incremental costs should not only consider the global environmental benefits directly related to the GEF financing, but also those associated with the financially leveraged portion of the project. The resulting guidelines should permit GEF funding to encourage in a cost-effective manner private sector investments that promise to be beneficial to the global environment. GEF needs to ask what type and level of incentive (GEF compensation) is needed for the private sector activity to be done in a more global environmentally friendly way. Hereby it should be taken into account that typically GEF financing will cause the project in question to receive higher priority by the firm, moving its expected rate of return from positive, but below the firm's hurdle rate, to above this hurdle rate.

15. Incremental cost calculations from the perspective of a government relate to economic costs (i.e. financial costs adjusted to account for a number of factors such as market imperfections or any taxes the country may levy or subsidies that it may provide). Yet as far as the company is concerned, only the financial costs and market conditions that it faces are relevant. In case the financial and economic incremental costs are significantly different, then the question may be asked whether these differences can reasonably be expected to be reduced by government policy changes. If this is not the case, then the GEF would have to decide whether the proposed funding of financial costs is worth the global environmental benefits.

16. Also, in order to get a private company to choose an approach which is more beneficial to the global environment, the inherent incremental risk to the company of doing so may have to be addressed as well in the GEF support arrangement. The project development portion of these incremental costs and risks are eligible for grant funding through the GEF's Project Development Facility.

*Recommendation:* Design an operational incremental costs guidelines for private sector projects that meet at least four criteria:

(a) provide positive incentives for the private sector to engage in activities beneficial to the global environment;

(b) avoid subsidizing activities the private sector would do anyway, so as to safeguard GEF's limited resources ("moral hazards" problem);

(c) provide rigorous as well as practical guidance to potential private sector applicants; and

(d) be consistent with a competitive market setting.

17. It is envisaged that best practice guidelines for defining incremental costs in private sector projects will be developed over time.

**Financing Modalities**

18. Several financing modalities may help to mitigate the risks perceived by the private sector of participating in the GEF, in the process enhancing GEF's ability to leverage GEF resources.

*Recommendation:* (a) Concessional financing arrangements should be considered in addition to the GEF's standard grant financing[11]. Concessional financing may include loans and loan guarantees. Loans might be at lower interest rates or with longer repayment periods than commercial loans. Loans could also have contingency features such as converting all or a portion of a loan to a grant if certain objective criteria are met: in other words, GEF funding would be repaid in case the venture had been successful. Loans might also be part of a project with a revolving loan facility; and

(b) Investment or venture capital funds might also be considered. GEF grant or concessional block financing might be provided to a fund for certain specified activities (such as project development and investment monitoring) or for offsetting incremental costs/risks. At

[11] Criteria for the use of non-grant financing will be discussed in a paper on additional financing modalities that will be prepared for the April/May 1996 Council meeting.

some point, the GEF might wish to consider the modalities of making equity investments in such funds. Moreover, modalities for use of financial sector intermediaries ought to be explored.

19. Exploring other forms of financing in addition to grants offers a number of attractions to GEF. Private sector sponsors are generally more interested in financial flexibility rather than grants per se. Using non-grant financing allows a financial discipline that is preferred by many private sector participants. Further use of non-grant financing extends GEF resources and allows regeneration of funds along with potential returns on funds invested. It would be expected that GEF private sector financing will evolve away from grant financing as new financial mechanisms are tested gradually and their results evaluated on the basis of a series of pilot transactions.

**Project Approval Process**

20. In order to facilitate involvement of the private sector, the GEF must be able to work under clear and simple decision rules, so that its financing may be consistent with private deal flow, and with a level of detail that does not stifle promising initiatives. Speedy decisionmaking based on national, interagency and global consensus building still seems difficult to achieve.

*Recommendation:* The GEF should develop a streamlined decision process tailored to private sector financing. While such a decision process would be faster, it would need to include special provisions to ensure as solid a system of checks and balances as for the GEF's Public sector financing. One option that could be considered in this context would be greater use of programmatic approaches building on a model such as the SME Program and the Biodiversity Enterprise Fund for Latin America that are currently being developed by the IFC (see <u>Annex B</u>). Such intermediary mechanisms for GEF private sector funding would function under clear, Council-approved decision rules and might thus be able to offer a streamlined decision process. It might also have to involve the inclusion of a GEF representative on the Fund Board. GEF grants to such funds could be managed, for example, as a revolving fund by the executing agency in question, who would be able to guarantee the private sector that once its approval had been obtained, GEF financing was guaranteed. The fund manager/executing agency would provide annual progress reports to the Council, which would be the basis upon which any future enlargements (or replenishments, in case of far below market lending) of the revolving fund.

**Other Important GEF Considerations**

21. *Replicability Potential.* The GEF funding base amounts to about $ 2 billion for three years. The scarce GEF financing will be leveraged if the project has the potential of broadcasting business opportunities which entail global environmental benefits.

*Recommendation:* In order to improve its chances of obtaining financing, the private sector is advised to highlight in its GEF project proposal any replicability potential and technological transfer benefits that it may be able to identify. From the GEF's perspective, replicability will be most effectively broadcasted to other business entities in the case of non-grant, market-based, financing. The GEF should also consider the leverage value of developing complementary mechanisms. This could include: (i) a project to systematically raise awareness concerning the global environmental dimension; and (ii) an information dissemination project, to effectively broadcast newly proven business opportunities with beneficial global environmental effects.

22. *Consistency with Recipient Country Priorities.*

*Recommendation:* All private sector projects will need endorsement from the Country GEF Operational Focal Point as to consistency with country priorities.

23. *Recipient Country Counterpart.* Under the standard process the GEF provides financing of incremental costs to recipient country governments. Certain operational issues will have to be worked out in the case of a GEF private sector project when the counterpart is a private company in a recipient country.

*Recommendation:* A recipient country private sector company should normally be identified as the lead party in the project.

24. *Transparency and Consultation.* As tends to be the case in public sector projects, typically some of the information related to private sector projects concerns confidential business matters, at times including proprietary technologies. GEF private sector partners are generally aware of its requirements for use of transparent and participatory processes in project design and execution so as to optimize the environmental and social aspects of its portfolio. They will be looking for reasonable assurances from the GEF's Implementing Agencies and executing agencies that proprietary data and confidential business information will not be compromised.

*Recommendation:* Standard information disclosure requirements of the GEF should apply to GEF private sector projects. It will be the responsibility of a GEF Implementing Agency or an executing agency to ensure that a private sector sponsor meets that organization's and the GEF's information disclosure requirements, while not compromising confidential and proprietary business information.

25. *Distorted Incentives* Certain distorted policy environments (e.g. in a country with highly subsidized energy pricing) may make it questionable that the GEF financing can achieve its global environmental benefit in a cost-effective manner. GEF grant financing itself could cause a slanted playing field.

*Recommendation:* GEF funding to private or public sector in a seriously distorted setting should be avoided. Also, GEF grants should be provided in a manner whereby competition is not muted by selective subsidies.

## Prospective GEF Private Sector Projects

26. Table 1 provides an overview of each of the focal areas programmatic strands with potential for GEF-funded private sector initiatives. In order to provide a clearer sense of the potential of a broadened engagement of the private sector, four project concepts are presented in some detail (see Annex C). Two of these present investment fund concepts, one of which, the IFC/GEF Biodiversity Enterprise Fund (BEF), is slated for Council review in October. The other two are programmatic concepts currently under development by the World Bank Group. Moreover, there are a series of promising private sector project concepts in a variety of GEF-eligible countries at various stages of development.

**Table 1: Selected Promising Private Sector GEF Activities**

| | |
|---|---|
| 1. Climate Change | • Renewable Energy; solar thermal, photovoltaic, wind, biomass.<br>• Energy Efficiency<br>• Sustainable Forestry |
| 2. Biodiversity | • Sustainable Forestry and Agriculture<br>• Ecotourism<br>• Non-timber forest products |
| 3. International Waters | • Alternative/Organic Aquaculture<br>• Privatized Ship Oil Waste Treatment Facilities |
| 4. Ozone Depletion | • CFC Substitution in Refrigeration and Foam Insulation<br>• Replacement of Solvent Use in Industrial Cleaning<br>• Replacement of Halons in Fire-fighting Applications |

## Conclusion

27. In order to engage the private sector fully the GEF should consider initiating some special operational modalities in recognition of the private sector's different way of operating and objectives. The private sector is used to financial discipline and speedy response. In its dealings with the GEF, it is not necessarily seeking grant financing. Financing could be made available in formats similar to conventional private sector financing, but the normal GEF decision process would be streamlined. The GEF should also consider adapting its approach in developing countries where the private sector is less developed. In these conditions, its role may be more oriented towards catalyzing public-private sector partnerships.

28. The implementation of the above recommendations should allow the GEF to leverage its funding substantially while accelerating commercial financing of promising innovations with potential for replication and a beneficial impact on the global environment.

## SELECTED PILOT PHASE PRIVATE SECTOR EXPERIENCE WITH GEF PILOT PHASE PROJECTS

In addition to the IFC/GEF Pilot Phase projects described earlier, a number of other GEF Pilot Phase projects involve private sector organizations or technologies in significant capacities. This selected list was prepared to acquaint Council members with the range of ways in which the private sector already participates either directly or indirectly in public sector GEF projects.

**World Bank Poland Coal-to-Gas Conversion Project** - among the project beneficiaries to which the Polish Environmental Protection Bank is providing GEF-assisted financing are enterprises in the process of privatization or which are already private.

**World Bank India Alternate Energy Project** - among the project beneficiaries to which the Indian Renewable Energy Development Agency (IREDA) has provided GEF-assisted financing are private sector sponsored wind farm developments.

**World Bank Thailand Promotion of Electricity Energy Efficiency** - the Electricity Generating Authority of Thailand (EGAT) and its newly formed Demand-Side Management Organization (DSMO) are actively working through GEF funding to encourage local private companies to manufacture more energy efficient lighting, refrigerators, motors and other key energy-consuming devices and consumer appliances.

**World Bank Tunisia Solar Water Heating Project** - Tunisia's Agence pour la Maitrise de L'Energie has obtained commitments of $13.6 million in private sector co-financing to accompany the $4 million in GEF financing.

**World Bank Brazil Biodiversity Project** - Brazil's Ministry of the Environment has been actively discussing mechanisms to ensure that private sector businesses and business foundations with an interest in biodiversity protection can participate in GEF-funded project activities.

**UNDP Brazil Biomass Integrated Gasification/Gas Turbine Project** - a public-private sector consortium was formed to further development of BIG/GT technology. An application for GEF support of a $70 million commercial demonstration BIG/GT plant under World Bank sponsorship is likely. In this follow-on stage private equity would be invested

**UNDP Chile Reduction of Greenhouse Gases** - the project includes a component designed to help stimulate formation of private Chilean energy service companies (ESCOs) to help commercialize energy efficiency activities within Chilean industry.
alongside GEF funds.

**UNDP Mauritania Wind-Electric Power for Social and Economic Development** - the project brings together local companies and international wind electric equipment suppliers to establish collaborative ventures. Participating communities will have equity investments in the systems.

**UNDP Pakistan Fuel Efficiency in the Road Transport Sector** - the project aims to enhance private-sector garage owners to engage in instrumented tune-ups of gasoline vehicles and diesel buses, as a means to increase the energy efficiency of the road transport sector.

**UNDP Cote d'Ivoire/Senegal Control of Greenhouse gas Emissions through Energy** - Efficient Building Technology in West Africa- the project aims to establish with the help of policy measures and financing mechanisms the local capacity to attract private sector participation in energy-efficient building projects, both for retrofit and in new buildings, thus helping to develop private sector markets in this area.

**World Bank/Inter-American Development Bank Costa Rica Tejona Wind Power Project** - the project was originally prepared by a private wind energy developer as an independent power project (IPP). Subsequent to the decision of the Instituto Costaricense de Electricidad (ICE) to develop the GEF project as a public sector project, the government decided to restart its IPP procurement program. Several private wind farm developers are now negotiating project financing arrangements for new wind power developments under power purchase agreements with ICE.

## EXAMPLE 1 - IFC/GEF POLAND EFFICIENT LIGHTING PROJECT

1. GEF has provided IFC with $5 million for a three-year pilot demand-side management (DSM) program to accelerate the development of the Polish market for energy efficient lighting technologies to realize global and national environmental benefits. The project gives financial incentives to Polish consumer and small business purchasers of compact fluorescent lamps (CFLs) and related products through a private sector approach. The mechanism used is a manufacturer wholesale price reduction approach pioneered by a U.S. investor-owned utility. Some 1.3 million CFLs are expected to be distributed and sold to consumers at reduced prices through the project. Funds will be competitively awarded among six Polish lighting manufacturers who are required to pass on the full value of the price incentive throughout the wholesale and retail sales process. The approach is considerably more cost-effective and administratively efficient than commonly used CFL financial incentives employed in utility DSM programs. The project is also undertaking pilot DSM activities at Polish electric utilities being privatized as well as consumer/lighting professional education programs. A Dutch private utility company is responsible for administering the project with support from a Polish energy efficiency NGO.

## EXAMPLE 2 - IFC/GEF SMALL & MEDIUM ENTERPRISE PROGRAM

GEF has provided $4.3 million to this experimental program administered by IFC to stimulate greater involvement of private small and medium scale (SME) enterprises in addressing GEF's biodiversity and greenhouse gas mitigation objectives. The Program has been designed to gain experience in several areas: a) the ability of SMEs to implement projects that address GEF objectives, b) the financial viability of these activities and the potential for commercial financing of these activities, and c) the ability of financial intermediaries to deliver GEF program funds to SMEs. Five or six experienced SME institutions (e.g., banks, venture capital companies, or NGOs) selected by IFC to act as Intermediaries for the Program will receive a low interest loan of $500,000 to $1 million from the Program. The Intermediaries in turn will provide debt or equity financing of about $20,000 to $200,000 to SMEs for the incremental costs of GEF eligible projects. The total capitalization of SME projects leveraged by the program may be in the range of $ 6 million. To encourage the Intermediaries to participate in the Program and to consider GEF-eligible SME projects, the Intermediaries may be able to retain 50% of all capital recovered from the SMEs. The Intermediaries and IFC will monitor and evaluate financial and global environmental aspects of the Program.

## SELECTED PRIVATE SECTOR PROJECT EXAMPLES UNDER CONSIDERATION

### BIODIVERSITY ENTERPRISE FUND

1. IFC is examining the use of investment or venture capital funds to encourage the private sector to invest in "sustainable" or environmentally sensitive businesses. Businesses that sustainably use or protect natural resources may include renewable energy, energy efficiency, sustainable forestry, alterative/organic agriculture and aquaculture, ecotourism, and recycling. These businesses in developing countries often encounter difficulties in obtaining financing for a variety reasons: small size, newer technology, lack of access to debt at reasonable interest rates, and project development or transactions risks and costs. Through a fund, IFC and private sector investors would bring together investment management expertise, advanced sector know-how, and local and foreign capital and make these resources available to businesses in these sectors of interest to the GEF. IFC is considering a $20-30 million Biodiversity Enterprise Fund to invest in forestry, agriculture, and ecotourism projects in South America. In addition, $5 million in grant or concessional funding from the GEF and/or other donors will be sought for the "incremental costs" of investing in biodiversity-linked investment projects (including higher than normal project development and environmental screening costs, the costs of an advisory board, and monitoring and evaluation activities). The fund will invest in projects with a capitalization of about $100 million.

### RENEWABLE ENERGY AND ENERGY EFFICIENCY FUND

2. IFC is also examining possibilities for a much larger global Renewable Energy and Energy Efficiency Fund to catalyze and finance investments (of generally less than 20 MW) in developing countries that use GEF-eligible technologies. New sources of largely private capital must be found to meet an estimated $160 billion in demand for energy supply projects financing in developing countries by the Year 2000. A feasibility study conducted by IFC with funding from the Governments of Norway, The Netherlands, Germany, France, and the U.S. indicates a fast growing "pipeline" of renewable energy and energy efficiency projects providing the proposed fund with adequate investment opportunities. These projects offer greenhouse gas mitigation potential when compared to fossil fuels and decentralized energy production can encourage local fuel use and technology development. However, it is presently difficult for these projects to attract interest from investors because they tend to be small transactions, require more time and support to bring them to investment quality than large conventional projects, and often involve newer technologies or new markets. The proposed fund will offer an opportunity for the international community to explore how commercial funding and a smaller amount of concessional funds might be integrated. Grant and concessional funds will be sought from the GEF and/or other donors for project development costs and to monitor and track the greenhouse gas mitigation benefits (or carbon offsets) of the funded projects.

## PHOTOVOLTAIC GREEN CARROT INITIATIVE

3. The World Bank, together with IFC, is examining the development of a large ($30-60 million) incentive program to accelerate the development and commercialization of Solar Photovoltaic (PV) technology. Broadly based on the successful "Golden Carrot" program for stimulating market development of high-efficiency, CFC-free refrigerators in the U.S., the Green Carrot would likely include a series of awards made on a competitive basis to three to five private company consortia providing the most innovative proposals for accelerating PV technology penetration and expanded commercial applications in developing country markets. The initiative would encourage innovative public/private partnerships that will use GEF financial incentives to leverage additional contributions of capital and resources to accelerate PV market development. PV technology is a zero-emissions energy technology with enormous potential for mass production and distribution. It is viewed as a preferred technology for mitigating GHG emissions under the FCCC but is not yet price-competitive in a range of applications and faces important market and other non-financial barriers in market niches for which PV is already a competitive power source. Participation by IFC is expected to facilitate an accelerated, private-sector oriented solicitation with the additional benefit of creating new models for longer-term financing arrangements tailored to PV and other comparable renewable energy technologies.

## FORESTRY MARKET TRANSFORMATION INITIATIVE

4. The World Bank, together with IFC, has begun to evaluate a new programmatic initiative which could be funded by GEF to promote the restructuring of global forestry markets to support the transition to sustainable forestry practices. Using the "market transformation" model inherent in the "Golden Carrot" and PV Green Carrot Initiative described above, a competitive process would be used to award GEF funds to a number of timber industry consortia willing to utilize more sustainable forestry practices in GEF-eligible developing countries on a pilot basis. Consortia would be required to include or show evidence in their proposals of: involvement of independent environmental/conservation or sustainable forestry NGOs, local community consultation and participation, government support, and independent certification of forest production as "sustainable". Available evidence suggest that there are significant market barriers inhibiting further development of "sustainable forestry" on a commercial level and that financial incentives would be useful to create workable models of sustainable forestry systems (i.e. alternative fiber sources for pulp/paper mills; indigenous multi-species plantations; low-impact harvest and sustained yield practices, and aggregation of certified sustainable timber purchasers) for broader replication. The availability of GEF funds offers the potential to leverage significant additional private sector investments in such sustainable forestry practices and to thereby accelerate the market transformation process.